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An Address
ON
SOME POINTS OF CLINICAL INTEREST CONNECTED WITH THE EXANTHEMATA.

Delivered before the Harveian Society

BY SIDNEY PHILLIPS, M.D. LOND., F.R.C.P. LOND.,

SENIOR PHYSICIAN TO ST. MARY'S HOSPITAL AND TO THE LONDON FEVER HOSPITAL; PHYSICIAN TO THE LOCK HOSPITAL.

MR. PRESIDENT AND GENTLEMEN,—One feature common to all the exanthemata is the rapid diminution in the mortality they produce in this country. In the year 1850, when the Registrar-General's returns commenced, the exanthemata caused 3233 deaths per million persons living; in 1908 (the latest year in which figures are available) they caused 861 deaths per million living—a fall of 73 per cent. in 58 years. Of the individual diseases typhus has all but completely disappeared, small-pox only occurs occasionally as an epidemic, which is trivial in mortality compared with those of bygone years.

SCARLET FEVER.

As to scarlet fever, the mortality has fallen from 890 deaths annually per million persons living in the decade 1861–70 (1861 was the first year in which scarlet fever was classified by the Registrar separately from diphtheria) to 80 deaths per million living in 1908—a decrease of 91 per cent. in 48 years. Even in years when an epidemic occurs nowadays the mortality is less than in the most favourable of years gone by. In my Presidential Address to the Harveian Society in January, 1908, I discussed the question whether this diminution in the number of deaths arose from lessened prevalence or from lessened virulence (case fatality) of scarlet fever. And I pointed out that since the Infectious Diseases Notification Act came into force this could be ascertained by a comparison of the actual number of cases notified with the number of deaths from the disease in each year. Even this comparison can only be made for individual districts, as notification is made to the local authority.

In the metropolitan area the cases of scarlet fever notified have diminished in number from 36,901 in 1893 (the first year in which the Act became generally acted upon) to 17,254 in 1909—a reduction of 53 per cent. During the same period of 17 years the case mortality fell from 6·1 to 2·5 per cent.—a fall of 59 per cent. These figures apply only to the metropolitan area, but probably similar figures apply throughout the country, and it therefore appears that the rapid diminution of the mortality from scarlet fever is due in part to its lessened prevalence, but in still greater degree to its lessened virulence in individual cases. This, I think, will tally with the experience of those who can compare their remembrance of scarlet fever as it occurred some 30 years ago with the cases as they present themselves now, often so devoid of the characteristic symptoms that the diagnosis becomes one of great difficulty.

INFECTIVITY OF SCARLET FEVER.

The questions are often asked, When does scarlet fever begin and when does it cease to be infectious? A boy was attacked by scarlet fever at school; no one else in the school had any sign of it. The boy was removed on the morning that his rash appeared. The only other boy who had slept in the room with him before he was removed showed the first sign of scarlet fever three days later, an interval corresponding to the incubation period of scarlet fever. I have seen, where one child got scarlet fever, all the other children immediately removed to another house and come back one by one at intervals as each caught the fever from the child last removed, though in every case the affected child was taken away immediately the rash appeared. One sees cases from time to time where the only explanation possible is infection from a case in its earliest stages, and I cannot doubt that scarlet fever is infectious directly the rash appears. The illogical reply that persons in contact with scarlet fever in an early stage may escape the disease has no force: first, because scarlet fever is not intensely infectious like measles and is not often taken from a short exposure to it; secondly, because cases differ greatly in their infective power, slight cases being apparently the least infectious and thirdly, because individuals vary in their infectibility at different times, as is often illustrated by nurses who nurse for months or years in a scarlet fever ward and eventually contract it.

Is scarlet fever infectious during the desquamation period? Whether the peeling epithelium contains the infecting organism remains to be discovered, but there is abundant evidence of scarlet fever being conveyed by clothing, letters, &c., the epithelial scales presumably being the carriers. An interesting case was that of a medical man who asked me to inspect his hands as they were peeling profusely; he had had a slight rash some time before. I sent him direct to the Fever Hospital. A week after he left home the servant cleaned out the rooms in which he had lodged, and three or four days after that she was attacked by scarlet fever. The interval was too long to attribute the infection to the first patient, and I can only attribute it to the epithelium left in the bedroom after he left. That persistent aural or nasal discharges may convey the infection is doubtless true, but this is not evidence that desquamating epithelium may not also do so, and though *very late* desquamation may not be infectious, we have no means of deciding when it begins to be so, and it is unsafe to regard peeling scarlet fever patients as anything but a danger to other persons.

The amount of peeling is not proportionate to the intensity of the rash. A servant who went into a room where a child had scarlet fever got the disease with well marked vivid rash. A few days later the sick nurse got sore throat, pyrexia, and symptoms of the fever, but with a rash so slight that I should have been very doubtful as to its nature had it not been for the surrounding circumstances. Both patients went into the London Fever Hospital; the servant who had the marked rash hardly peeled at all, while the nurse who had next to no rash peeled most profusely.

Medical men who have decided that a questionable case is not scarlet fever should still keep an eye on the patient so that they may revise their diagnosis if peeling occur.

RHEUMATISM IN SCARLET FEVER.

One of the commonest complications of scarlet fever is rheumatism. When it affects the joints in adults it usually gives pain; but in children the joint affections are often quite painless, even more so than in non-scarlatinal rheumatism, and often a considerable rise of temperature will be the only symptom to call attention to it. Scarlatinal rheumatism may affect the fascia or the muscles; in one case there was a very acute myositis of the muscles of the lower limbs. Scarlet fever (and other exanthems) are usually credited in text-books with causing endocarditis and pericarditis, but in my experience this is very rare even when rheumatism occurs. When the heart or the pericardium is affected in scarlet fever I think rheumatism is the link between them and the scarlet fever, and the same is true of chorea. Nodules sometimes occur in scarlatinal rheumatism.

Purpura may occur in scarlet fever, and is, I think, generally associated with rheumatism. In the case of a youth in the Fever Hospital in September, 1907, severe rheumatism followed ten days after scarlet fever with many joint effusions, with high temperature, delirium, and serious symptoms. As in one knee-joint fluid remained a long time I introduced into it a needle, thinking it might contain pus, but withdrew pure blood. The case appeared to be one of rheumatic purpura, and he got quite well.

Rheumatism should always be borne in mind as a possible cause of otherwise unexplained rises of temperature during convalescence from scarlet fever, and often on careful search effusion in some joint, usually the knee, or some other local rheumatic affection will be found.

RENAL COMPLICATIONS DURING SCARLET FEVER.

It has been questioned whether the albuminuria so common during scarlet fever convalescence always signifies nephritis. But I have seen necropsies after scarlet fever which showed evidences of nephritis when there had been no albuminuria, and I know of no cases of scarlatinal albuminuria in which a necropsy showed absence of nephritis, and scarlatinal albuminuria should always be treated as being an indication of nephritis.

I think the change of type in scarlet fever that has taken place in the last few years is shown by the descriptions in the older text-books of scarlatinal nephritis with much albuminuria, hæmaturia, dropsy, &c.; these now seldom occur. What one commonly finds is that the urine contains a little cloud of albumin, and in adolescents especially a trace of blood, but the patient has no symptoms whatever except perhaps a little pallor of face or feebleness of pulse. Sometimes there is a little headache, but as a rule the patient complains of nothing whatever, and any symptoms soon pass off with the albuminuria if the patient is kept in bed, but if care is not taken the albuminuria will increase.

On the other hand, symptoms pointing to marked defect in the renal functions may occur without any albuminuria. In the gravest form of chronic kidney disease—granular kidney—there may be no albuminuria, and the same may be the case in the acute renal affection of scarlet fever. In some cases there may be very severe headache, with or without vomiting, perhaps œdema, little or much, with free flow of urine without albuminuria; sometimes later on albuminuria appears.

An important class of case is that in which there may arise from failure of recent function persistent vomiting without albuminuria or with the very slightest trace of it and without any other symptom of nephritis. A well-marked example was the case of a girl of 15 under my care at the London Fever Hospital, who was admitted for scarlet fever rash and a temperature of 100° F. on July 10th, 1898. The case was a mild one, but on the 16th vomiting commenced with a very minute trace of albumin in the urine. The vomiting was incessant and she was unable to keep down anything, even hot water, for four days. The daily average of urine was 35 oz.; she had much pain in the back. On the 22nd the vomiting recommenced and persisted for many days, the patient's life being in great danger from inanition. There never was dropsy or headache, but throughout there was the trace of albumin in the urine.

A girl of 11 got scarlet fever rash on July 21st, 1900, and came into the London Fever Hospital. She went on well till August 10th, when she got diarrhœa and a considerable quantity of albumin was present in the urine. This soon sank to a very minute quantity, but only 10 oz. of urine were passed each day. Directly the quantity of urine lessened, although there was scarcely any albuminuria, violent and uncontrollable vomiting began, and it persisted till Sept. 17th—37 days. During that time she was kept alive entirely by nutrient and hot-water enemata. She became extraordinarily feeble and emaciated and was in grave peril for many days, but during all this time there was no symptom of nephritis except the vomiting and decreased secretion of urine, with a small trace of albuminuria. After Sept. 17th the urine increased in quantity, became free of albumin, and she was convalescent on Oct. 23rd.

Similar cases occur in diphtheria, as in a child seen in 1909 with Dr. J. Davidson of Uxbridge, and also in renal cases unconnected with exanthems. The vomiting is sometimes associated with very severe pain in the abdomen—possibly from stretching of the capsule of the kidney when it is greatly engorged. Such cases with vomiting and abdominal pain are likely to be interpreted as some grave intra-abdominal lesion requiring laparotomy. Bradford[1] remarks that "the grave error of mistaking uræmia for intestinal obstruction has been made more than once." In one such case my suggestion of uræmia was not adopted, and on other advice laparotomy was actually performed for supposed intestinal obstruction, only for the patient to die from suppression of urine. I have seen other cases in which operation was proposed for uræmia, under the impression that the symptoms resulted from duodenal ulcer, from appendicitis, and from an undiagnosable condition. And I wish to lay stress on the occurrence of vomiting and severe pain in the abdomen as signs of uræmia even when little or no albuminuria is present.

MEASLES.

Measles, like other exanthems, is declining in the mortality it produces. The deaths from measles per million living fell from 412 annually in the decade 1851–60, to 362 annually in 1901–05; and though at the present moment measles is very prevalent, there is reason for anticipating that the figures for the five years 1905–10 will show a lesser mortality than ever before. Measles is still, however, the most fatal of exanthems, causing 3 deaths to every 1 from scarlet fever, and to every 2 deaths from diphtheria; whooping-cough alone approaches it, causing 300 deaths to every 380 from measles.

The seriousness of measles is the greater from the debility and the glandular and pulmonary affections which may follow it. It is generally accepted that it predisposes to the onset of pulmonary tuberculosis, and from the very large proportion of cases in which tubercle of the abdomen in children is preceded, by some weeks or months, by measles, there is a strong presumption that measles predisposes also to abdominal tuberculosis. Both measles and abdominal tubercle are commonest in the second and third years of life, and it seems more probable that this is so because measles predisposes to it, than the suggested explanation that it is contracted by swallowing tubercle bacilli from the floor during the crawling age.

INFECTIVITY OF MEASLES.

The extreme infectiousness of measles was exemplified in 1904 when of 14 students whom I took for five minutes into an isolation room to see a case of measles, the only student who had not previously suffered from measles contracted a severe attack, of which the first symptom occurred nine days less two hours after infection. Small-pox is equally infectious. I was accompanied by eight or ten students to an isolation room to see a case of small-pox. An interview of five minutes' duration sufficed to infect one of the students, who inaugurated by a faint a slight attack of small-pox, 11 days less two hours after the infection.

The different infective activity of measles and scarlet fever is illustrated by a case I saw in February, 1910, with Dr. J. D. Cree—that of a youth who had on him at the time the rashes of both scarlet fever and measles, and who was staying in the home of his sister who had lately been confined. I moved him at once to the London Fever Hospital, where the rash of measles came out more profusely, and he subsequently desquamated freely from the scarlet fever. The infant, with whom he had been in contact before he left home, got measles eight or nine days after, but rejected the opportunity of contracting scarlet fever.

LOBAR COLLAPSE OF LUNG IN MEASLES.

Lobular collapse of lung is not uncommon in children with measles and bronchial and alveolar catarrh, the collapsed lung being small areæ disseminated through both lungs and mixed up with other areæ of alveolar catarrh and of insufflation. Such a condition is usually regarded as a result of capillary bronchitis. But collapse of the whole or the greater part of a lobe (usually the lower lobe) may suddenly occur in measles without a trace of bronchitis, which, indeed, even if present, would be quite incapable of producing such sudden collapse of a whole lobe. The onset of the collapse is attended with very distressing and alarming dyspnœa.

Twelve years ago I was called in the middle of the night to see a child who was suffering from measles and who had had such an attack on the previous afternoon. I found the child (aged 4 or 5 years) lying in bed with terrible dyspnœa, gasping for breath, intensely cyanotic, with feeble pulse and disturbed heart action. The lower half of the left side of the chest was quite dull on percussion, with sucking in of intercostal spaces. The temperature was 103° F. After artificial respiration, pressure on the abdomen, and strychnine the urgency of the symptoms passed off. She was much better next morning, with normal temperature, when I saw her with her medical attendant. She got gradually well, but the physical signs on the left side have not even now quite cleared up.

Such cases also occur in other conditions than measles, but are most common in measles. Successive attacks may occur in each of which there is evidence of lobar collapse; they are liable to be taken for pneumonia or pleurisy or for asthma. They are certainly not due to any mechanical plugging up of bronchial tubes, and I can only attribute them to a sudden paralysis of the muscular fibres of the bronchi.

DIAGNOSIS OF MEASLES.

The early diagnosis of measles from Rötheln is sometimes quite impossible. The preliminary catarrhal stage of measles as a diagnostic difference is not to be relied upon, for there

[1] Clifford Allbutt's System of Medicine, vol. iv., p. 328.

may be none such observed in measles, and I am quite sure that rötheln rash is not the first symptom of the disease in many cases, there being a precedent two or three days of feeling of illness, and, may be, coryza and often tender lymphatic glands. Again, the lymphatic glands in measles may be enlarged in the neck and over the head as well as in rötheln, though in some cases of the latter the enlargement is characteristic. On the whole, the most reliable point in the diagnosis are Koplik's spots. During the last epidemic of small-pox, measles was, in my experience, more commonly taken for it than anything else, the reasons being the great swelling of the face in bad measles cases and the fact that over the forehead, where there is little underlying soft tissue, measles papules feel "shotty."

Pityriasis rosea may resemble measles at the onset, beginning with pink mottling on the body with a little pyrexia and malaise. And during the last year or two three cases of pityriasis rosea seen by several medical men were sent into the Fever Hospital for measles. It is well to bear in mind that the actual measles rash may be preceded by two or three days by a pink mottled prodromal rash on the face and neck; this rash disappears two days or so before the measles rash. There is an interval in which the patient is free of rash, which has several times led to the mortifying experience of the practitioner of wrongly condemning his own correct diagnosis.

TYPHOID FEVER.

Typhoid fever, like the other exanthems, has in late years greatly lessened in the mortality it causes. Since typhoid fever was first separated from typhus fever in the Registrar's returns in 1870 the annual mortality from it has fallen from 390 per million persons living to 75 per million in 1908, a reduction of 80 per cent. Comparing the notifications of the disease with the number of deaths annually since the year 1890, the case fatality has fallen very little, if at all, from 16·9 per cent. to about 16 per cent. (it was 16·8 in 1908). It would therefore appear that the lessened number of deaths from typhoid fever is due in far greater degree to its lessened frequency of occurrence than to its lessened danger in individual cases. Perhaps the figures here do not express the facts with exactitude, for mild typhoid fever seems commoner than heretofore, and such mild cases may escape notification while fatal cases do not. And typhoid fever, whether more or less virulent than formerly, is certainly very different in type from the time when it so resembled typhus that the two were regarded as the same disease. One rarely sees now, except in cases imported from the continent, the copious diarrhœa, muttering delirium, and the typhoid state seen even 20 or 30 years ago.

There is a general agreement that milk with barley water or other diluent is the best diet in typhoid fever. Citrate of soda added to milk is of great use in preventing heavy curd formation, but I am doubtful whether it is advisable to continue it throughout a protracted case of typhoid fever. Sir Almroth Wright has shown that it increased the coagulability of the blood if given very long. A patient seen in 1908 with Dr. Hastings Stewart was fed entirely on citrated milk throughout a long-continued typhoid attack; he then got very extensive thrombosis of the veins of the lower limb. Later on he had a relapse of his typhoid and equally severe thrombosis in the veins of the other lower limb. Whey is often useful where milk cannot be taken, and my experience agrees with Dr. Gee's that patients thrive well on it.

During the last 15 years I have followed the practice of Sir William Broadbent in giving calomel or mercury in typhoid fever. Although mercury does not shorten the course of the disease it certainly appears to exert considerable influence on the toxic symptoms, and lowers the range of temperature. There is no reason to withhold calomel when diarrhœa is present; indeed, it may be controlled by it, and if necessary salicylate of bismuth or Dover's powder can be given with it. Cold bathing is, no doubt, very efficacious, but a patient seriously ill with typhoid fever cannot be moved from bed frequently to and from a bath-room, and the bringing of a large bath and many cans of water into a bedroom, and cooling a bath down by adding water to the bath when a patient is in it, without a waste-pipe, together with the labour and noise entailed in emptying and removing the bath from the room, render it impracticable as a routine method in private practice. As a rule tepid sponging suffices to keep the temperature within moderate limits and gives great relief.

(Cases were related exemplifying the occurrence of very severe nervous disturbance in epididymitis following mumps.[2])

PREGNANCY AND LACTATION IN RELATION TO THE EXANTHEMS.

The exanthems may occur during pregnancy. In a very severe case of typhoid fever seen with Dr. W. F. Campbell in 1889 in the seventh month of pregnancy, and in a case with the late Dr. W. Barter in 1909 in the eighth month, a healthy child was born in each case at full term. In a case of typhoid fever in the fifth month abortion occurred. This was a very severe case, in which suppuration and sloughing of the parotid gland occurred, but the patient recovered. In many cases of scarlet fever occurring during pregnancy in early and in late months, some of them severe, healthy children were born at full term.

I have seen two cases in which lactation was performed during typhoid fever. In one case, seen with Dr. Beaman Hicks in July, 1904, the child was suckled during the first eight days of typhoid fever without apparently suffering, but the mother afterwards got parotitis. In another case at hospital in 1898 the infant, eight weeks old, was suckled for the first 10 days of severe typhoid fever, when the milk dried up.

HYPERPYREXIA.

Hyperpyrexia is often spoken of as a complication of the exanthemata. In young children a high temperature very readily occurs in the exanthems without grave significance, but I have not seen any case of hyperpyrexia in adults from the exanthemata without some local complication to account for it, nor have I found any instance in the case books for many years past of the London Fever Hospital. I show here numerous charts of temperatures over 106° F. in the exanthems, and in every one there was a local cause: in typhoid fever pneumonia over and over again, or peritonitis after perforation, and in one case cerebral meningitis, in another abscess and sloughing of the gall-bladder, and in another the explanation was found post mortem in a calculus and abscess in the kidney.

In scarlet fever, hyperpyrexia is usually due to some rheumatic affection such as pericarditis or to middle-ear suppuration, relievable by perforation of the tympanic membrane, or to mastoid suppuration with or without intracranial suppuration, or to thrombosis of an intracranial sinus.

In diphtheria in adults hyperpyrexia is usually due to septic local lesions, such as broncho-pneumonia. And one should not be satisfied with the diagnosis of hyperpyrexia in fevers without a thorough investigation for some local lesion, possible relievable by treatment.

ASSOCIATION OF TWO OR MORE EXANTHEMATA.

This is very common, though such cases are often recorded as curiosities. In hospitals for infectious diseases one of the things requiring specially to guard against is that patients admitted for one exanthem shall contract another, and, indeed, they seem peculiarly liable to do so.

It is common for children to be sent in with scarlet fever who also develop measles or chicken-pox after admission at a date showing that they had already contracted the disease before admission. It is well known that whooping-cough often follows on measles, and diphtheria on scarlet fever. An instance in which scarlet fever and measles rashes existed at the same time has already been given. Scarlet fever may occur with typhoid fever, both rashes being visible at the same time. Mumps is not uncommon with scarlet fever; I have now under my care at the Fever Hospital children of a family with both scarlet fever and mumps. In a case seen with Dr. W. Balgarnie of Winchfield in 1898 mumps came on late in the disease with very severe symptoms. Influenza, as is well known, is often in some way associated with typhoid fever.

In general, the association of two exanthems at the same time tends to severity of symptoms. In a case of typhoid fever with scarlet fever fatal hæmaturia occurred, the necropsy showing the ureters full of blood, which evidently came from the kidneys.

[2] These were published in THE LANCET of Jan. 7th, 1911, p. 23.

FIFTY-SIX CASES OF CLEFT PALATE TREATED BY OPERATION,

WITH SPECIAL REFERENCE TO THE VARIOUS METHODS OF OPERATION AND THE AFTER-RESULTS.[1]

BY JOHAN ULRICH, M.D.,

SURGEON TO THE QUEEN LOUISE HOSPITAL FOR CHILDREN, COPENHAGEN.

IN communicating, at the invitation of the Surgical Section of the Royal Society of Medicine, some of my results of operations for cleft palate, I must first express my regret at the difficulties imposed by having to address you in a language foreign to me and at the fact that it has been impossible for me to demonstrate my patients here.

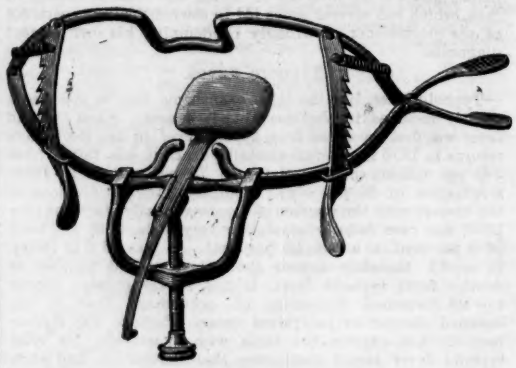
Since 1903, when I began these operations, I have had 77 cases, of which 21 have not been operated on, partly because of the presence of other mortal diseases—encephalocele, heart disease, and others—or the operation has been postponed. In a few cases I have refrained from operating on account of the breadth of the cleft.

The 56 cases which have been operated on I have noted on the diagram here shown. The first two columns of the diagram give the numbers and ages of the patients; the next two columns show the complete clefts, the first the broader (as a rule about 2 centimetres) and the second the narrower clefts; the next two columns show the incomplete clefts, broader and narrower. In the next two columns are shown the operations by Langenbeck's method. The former of these gives the operations where healing is attained absolutely or practically with a hole only passable for a fine Bowman's probe, or a little cleft in the uvula not worth an operation (the numbers indicate how many operations I had to do to secure healing, while the absence of a number indicates that only one operation was done); in the latter are given the cases in which complete healing has not yet been attained. Some of these cases belong, perhaps, rather to the healed class, as the holes are quite insignificant. In the next column are some cases operated on by Arbuthnot Lane's and Brophy's methods, or by a modification of the latter operation which I have tried but have almost abandoned. The last column but one contains some supplementary operations with remarks appended. The sign (†) indicates the cases of patients who have died after the operation. The last column refers to the speech, so that three crosses (xxx) indicate normal or nearly normal speech, and one or two crosses show the cases in which the results were not so satisfactory. Of course, the estimate of the quality of speech is personal. The records are rather defective; many patients have not yet learnt to speak; many are living in the country (marked C), whose capacities I cannot test; others, again, have been lost sight of (marked A).

I may here mention that in Denmark State support is afforded in two different ways for the treatment of cleft palate. First, by paying a dentist in Jutland and another in Copenhagen for making artificial palates for a certain number of patients; and, secondly, in receiving patients operated on or patients with protheses for instruction in speech. It is now arranged that if a patient comes to the institute with a cleft palate he may get a prothesis even for the smallest cleft in the uvula, because financial provision is made only for protheses, not for fees for surgeons and operations. It is impossible to imagine a more stupid arrangement. The explanation is that the matter has been arranged by a smart dentist in Jutland in connexion with some Members of our House of Commons. It will, however, certainly soon be altered (and our medical director, who is a surgeon himself, is at this time interesting himself in bringing about a better arrangement, probably, so that a surgeon shall direct the treatment of all cases and decide as to which cases shall be operated on and which shall have artificial palates, and direct them accordingly to the dentists).

As you will see in the diagram, the patients, except those operated on by Brophy's or Arbuthnot Lane's methods, have been operated on between the ages of 2, or a little below, and 11 years. Of course, for functional results it is best to operate early, but according to my experience it is much easier to effect a cure in some older children than at the age of 2 years or below, and I think that I shall in future prefer to operate a little later—for example, at the age of 3 years.

In reference to the technique, I use Geffer's gag (see illustration), depressing the tongue and passing a string through it which I fix to the gag. In some cases of small children I have used Arbuthnot Lane's gag, and have found it very practical. For the freshening I employ besides different knives, Trélat's lance coudée, especially for the anterior angle. For loosening the muco-periosteal flaps I mostly use Trélat's rugines, one for the right side, another for the left, and one, more bent, for the anterior angle. I find them more handy and more powerful than the English rugines that I have used. These I find more suitable for completing the loosening. For the detaching of the nasal mucous membrane from the hard palate I generally use Mr. James Berry's scissors, but I find them a little too big—it is not always easy to manage them with small children. For the sutures I use metal wire (aluminium-bronze) and Trélat's needle. It is passed through the right border of the cleft, threaded with the metallic wire, drawn back, turned

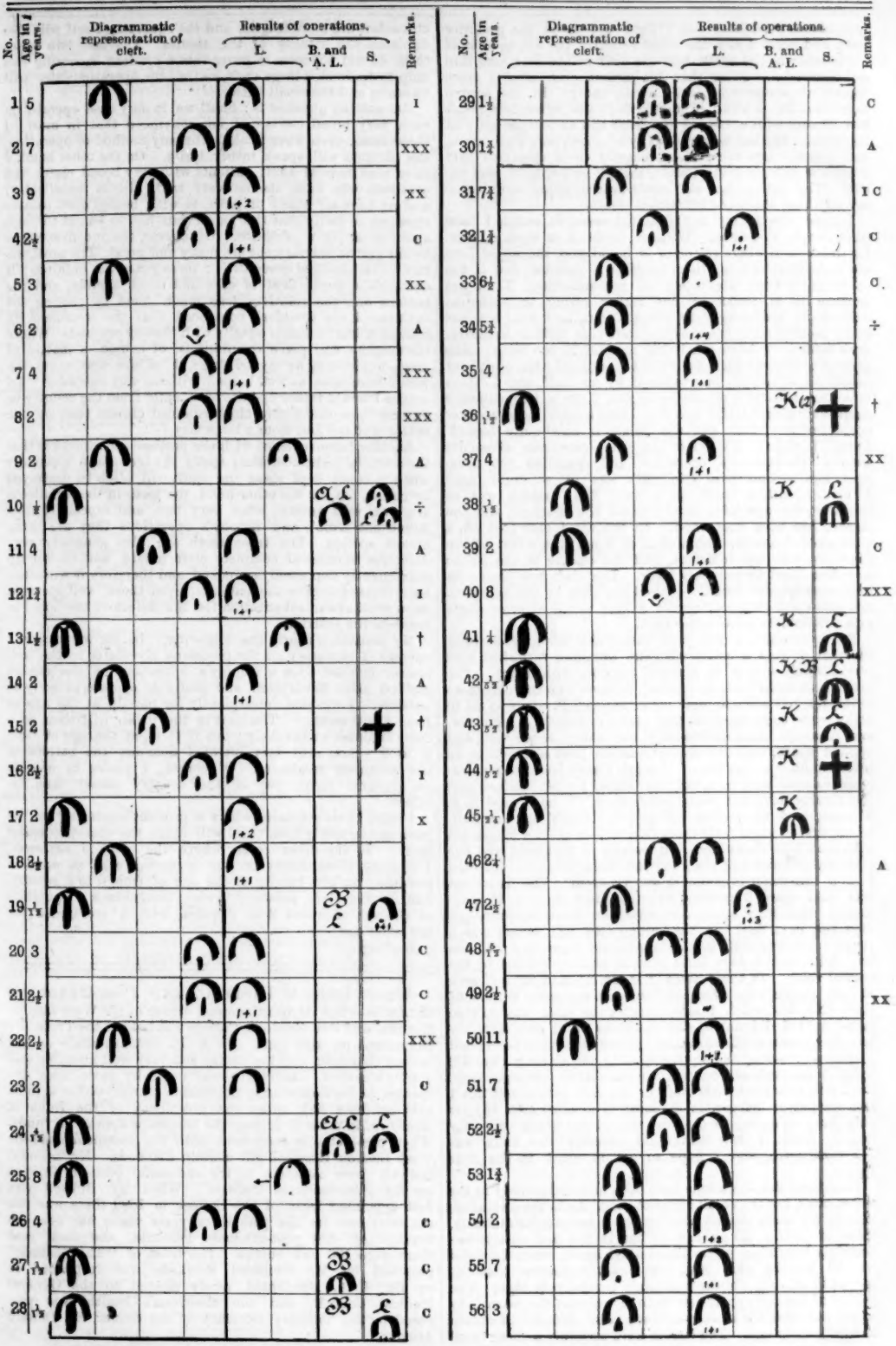


180 degrees, then passed through the left border and the string released. The technique is very easy and the wire is generally well placed. For the uvula I use silk, small Hagedorn's needles, and a little needle-holder constructed by Doyen.

As to the results of the operations, you will see that in the 44 cases operated on by Langenbeck's method I have effected healing in 37; in 22 in one operation, in 13 after two operations, in 3 after three, and in 1 after five operations. The cases which have required two or three operations have in part been those where the closure of the anterior angle of the cleft has been postponed, and in part those where a little hole has remained, generally between the hard and the soft palate. A few cases have been more difficult on account of a bad constitution or of throat diseases with virulent microbes. Some of these cases are still not healed. No. 9 has disappeared. No. 13 died at home from pneumonia in no way related to the operation. No. 32 was very difficult to operate on, becoming always asphyctic during the operation as soon as the mouth was opened sufficiently for operating purposes. In No. 47 there were four operations; there still remain two small holes in a very thin palate; it is possible that the tissue is so bad that a complete cure will be difficult to effect. In Nos. 12 and 25 the holes are so small that they belong rather to the healed cases, and are not worth any operation. One patient, No. 16, died three weeks after the operation from pneumonia with empyema, certainly in relation to the operation. I have since learnt that the child had bronchitis before the operation.

As you see, I have operated on two of my patients, Nos. 10 and 24, both bad cases, by Arbuthnot Lane's method. The operation is more difficult than Langenbeck's operation, but not so difficult as is commonly supposed. In the first case (No. 10, a child 6 months old) I obtained healing per primam and thought the operation would prove quite successful. The patient left the hospital with a closed palate, but when I saw the child two years later I found a little hole in the middle of the palate and a cleft 3 cm. long at the back. I tried to close these defects by an operation by

[1] A paper read at a meeting of the Surgical Section of the Royal Society of Medicine on May 9th, 1911.



The diagrams show the palate seen from below, with a rough representation of the extent and situation of the cleft. K, Clamp employed; B, Brophy's operation; L, Langenbeck's operation; A L, Arbuthnot Lane's operation; XXX, good speech; XX, fair speech; X, poor speech; C, in the country, cannot be traced; A, no address; I, imbecile; ÷, bad result; †, death.

Langenbeck's method, but I have not cured the posterior cleft, and when I saw the child recently the appearance of the palate was the same, and the soft palate was very thin and cicatricial. I fear that this patient, even after a more successful re-operation, will speak badly. In the second case (No. 24, a child 6 months old) the immediate result was closure with a hole at the front and an oblique cleft at the back. The last was treated by a Langenbeck's operation, and when I saw the patient recently there remained only a narrow hole, but the palate, though well-shaped, was too stiff. The patient has still not learnt to speak, so I cannot say anything about the functional result.

I come now to my most painful cases, in which I have tried Brophy's method. Without doubt it is most rational for those cases where the cleft is broad and the upper jaws are wide apart to bring them together if possible, and if the operation cannot absolutely be recommended, it is not because it is irrational but rather owing to technical difficulties, the danger to the children, and last, but not least, because the reunion of the cleft is so difficult in newly-born babies. I have tried this method in ten cases. The first (No. 19) was that of a child 1 month old; the cleft very broad, about 1½ cm., was reduced by one half, and 17 days later the wires still remaining *in situ*, I did a Langenbeck's operation with partial healing. One month later another operation was done and the palate is now quite healed. Later I closed the cleft in the processus alveolaris with a Bardeleben's operation, and remedied the hare-lip. The second case (No. 27) was in a child aged 1 month with a cleft of 2 cm. The patient was so ill after the operation that I dared not continue, and the closure has been postponed. In the third case (No. 28, a child aged 1 month, with a cleft of 2 cm.) the effect of the operation was not sufficient, and the closure of the palate was first tried three years later. The cleft was then only half a centimetre broad. I cured the cleft in one operation and two small re-operations for a hole in the anterior angle and a little hole more to the back.

For squeezing the two jaws better and more successfully together I tried a clamp with two branches furnished with teeth, which should be screwed together with a key. The instrument looks quite brutal and is more like an instrument of torture, but when applied under narcosis it seems to me to be no worse than the wires and plates in Brophy's operation, and it works more successfully, can easily be removed and applied again, and one can squeeze the jaws as much or as little together as one likes. Though I have found the instrument to work well in a technical sense, I must confess that the results have not been satisfactory. I have used it in 7 cases, and in 2 (Nos. 36 and 44) death has resulted. In the first of these fatal cases (No. 36)—a child a month old with a cleft of about 2 cm.—it worked at first well, and the cleft was reduced to ½ cm., but the child becoming infected from a salt-water injection it was removed. The treatment was tried again 9 months later (certainly an error of judgment). The child again contracted an acute infection and died the next day. In the second (No. 44), which was a similar case, the cleft was reduced from 2 cm. to ½ cm., but the child died 6 days later from a septic phlebitis in the cranial veins. In three cases (Nos. 38, 41, and 42) a closure of the palate was attempted without success. In one of them (No. 42) which I saw recently the cleft was still so broad that I did not operate, and the child will certainly have to have an artificial palate. In only two cases have I had a little success by the squeezing. In one of them (No. 43) which I operated on recently, two years after the squeezing, there still remains a little cleft in the soft palate, but this I feel certain of being able to cure. The other (No. 45) has only been squeezed to diminish the cleft, which was very large. When I saw the child recently the cleft was ½–1 centimetre, and I hope to get it closed in the near future.

Of course, the operations have been undertaken only in the worst cases, but the results are not good. As to the mortality, it is, in my cases treated with Brophy's and similar methods, 2 out of 10 (i.e., 20 per cent.); but in the first case it was certainly imprudent to try the method again, when the child was 10 months old. And one must remember that the mortality of such children certainly is relatively high. The failure of the early operations is in my opinion due essentially to the fact that the healing is much more difficult to obtain at a very early age. The tissues have certainly a more fœtal character, are more fragile, and the squeezing itself will also diminish the vitality of the tissues. The last two cases (Nos. 43 and 45) seem to prove that a prudent squeezing can help to diminish a large cleft, so that the operation later will be easier and the result better.

But another question is: Shall we in any case operate on such very broad clefts? I am convinced that in most of these cases, even when healed after any method of operation, the patients will speak rather badly. On the other hand, I have seen several adult patients with very broad clefts and prothesis who have spoken very well, almost excellently, and we have all heard of patients with healed cleft palates speaking so badly that the palate has had to be cut through again to apply a prothesis. Of course, the inconveniences by the prothesis treatment are many and great. The prothesis has to be changed every two or three years for children; it demands a great deal of care and much trouble, and the patient and the relatives lose much time in visiting the dentist. I am therefore convinced that the treatment by operation has its limits equally with that by prothesis. Where the surgeon will place the limit is, of course, a matter of taste, but looking at my 56 cases, I believe that about ten would have been as well helped without any operation. Of course I would rather operate on a child from the country or on one from the poorly circumstanced classes than on one better situated and from a large city.

Another inconvenience with the prothesis treatment is that the artificial palate certainly spoils the teeth, and especially when it is not kept clean the teeth will often be destroyed by caries, but, on the other hand, the teeth in these patients are, as is well known, often very bad, and especially after Arbuthnot Lane's and Brophy's operations they are often almost spoiled. The front teeth are also generally very defective in cases of complete cleft palate, and the top lip is frequently depressed or crooked, and therefore it will often be indicated to give the patients, even those well operated on, a prothesis in substitution for the defective teeth and to regulate the exterior.

My position is nearly the following. In the worst cases I operate if necessary on the processus alveolaris by the unilateral method with a Duplay's operation, by the double method after Bardeleben, and prefer to operate as early as possible. I operate subsequently for harelip at the age of from 4 to 6 months. The cleft in the palate will then, as a rule, diminish successively; but if it is, at the age of from 2 to 3 years, still very broad I abandon the patient to the prothesis treatment. Of course, I prefer to operate on patients right out in the country rather than on others.

I think there are cases where a prudent squeezing of the jaws on the newly born child will make the operation easier later. In the other cases, where the cleft is narrower, I operate if necessary on the processus also as soon as possible; on the harelip at the age of from 4 to 6 months, and for the cleft palate I prefer Langenbeck's operation at the age of about 2 or 3 years, with a preference for the latter age.

Copenhagen.

WEST LONDON HOSPITAL AND POST-GRADUATE COLLEGE.—The thirteenth annual dinner of the West London Hospital and Post-Graduate College was held at the Trocadero Restaurant on May 18th. Dr. A. P. Beddard made an excellent chairman, and the dinner was very well attended and most successful. Reference was made by more than one speaker to the forthcoming Coronation dinner, which is to be held on June 29th under the presidency of the Duke of Abercorn, in order to further the hospital's appeal for funds. When completed in accordance with the present scheme the West London Hospital will contain 250 beds. Mr. Leonard Bidwell drew attention to the successful position enjoyed by the Post-Graduate College. When Mr. Bidwell was first appointed Dean of the College in 1893 there was one student; now for the past three years there has been an average of 220 post-graduate students, and last year there were 100 new entries. The toast of "The Visitors," proposed by Mr. Swinford Edwards, was responded to by Dr. J. A. Macdonald, newly elected to the General Medical Council, and the chairman's health was proposed by the honorary secretary of the dinner, Mr. Donald Armour.

THE PRESSOR BASES OF THE URINE:

THE EFFECT OF AGE, DIET, AND HIGH BLOOD PRESSURE ON THEIR EXCRETION.

BY WILLIAM BAIN, M.D. DURH., M.R.C.P. LOND.

(*From the Physiological Laboratory, King's College, London.*)

IN two previous papers[1] I called attention to the importance of certain bases which are normally present in the urine of adults. They resemble each other in that they raise the arterial blood pressure of animals when injected intravenously. In certain urines, however, they may be absent or greatly lessened in amount. The most interesting of these are cases of high blood pressure; my view of such cases is that the high pressure is mainly due to the retention of the bases in the body.

Without undue recapitulation it may be mentioned that one of the bases is soluble in ether and is probably iso-amylamine (a derivative of leucine). The other is then extracted with amylic alcohol, and is probably *p*-hydroxyphenyl-ethylamine (a derivative of tyrosine). The bases originate by putrefactive processes from protein in the alimentary canal. The most convenient way of obtaining them is to shake up the urine with charcoal and then filter. The charcoal adsorbs the bases, and they may be subsequently extracted from it by hydrochloric acid. The bases have not yet been collected in quantity; therefore more evidence than that previously given concerning their identification cannot be adduced here, but experiments are being conducted now which it is hoped will establish their identity.

The present paper deals with the subject on the same lines as before, and is based on the examination of 50 different urines. The result has been to confirm and to some extent amplify previous conclusions. In all cases the charcoal method has been used, and in each case the same quantity of urine has been employed—namely, two litres. My method, however, has been slightly modified in the following respects: 1. 5 per cent. of blood charcoal (Fleming's first quality) was added to the urine, as 4 per cent., the amount previously used, was not always sufficient to adsorb all the bases, especially in well-fed normal subjects. The charcoal must be pure; I found the different specimens supplied varied slightly, and iron was sometimes apparently present, for in the acid filtrate of several samples a bluish-green precipitate formed on the addition of alkali. In such cases the solution was again filtered before extracting with ether. 2. The shaking of the urine and charcoal together must be very thorough, and so this was done in a bottle-shaker worked by an electric motor. 3. In previous experiments the hydrochloric acid extract of the charcoal, after being made alkaline, was extracted with ether six times. This is not always sufficient to extract the whole of the ether-soluble base, especially in normal urines from people who take much animal food. I now make it a practice to extract with ether ten times, so as to make sure that the whole of the ether-soluble base is removed prior to extraction with amylic alcohol. It now appears to me that in some of the previous tracings the effects of the amylic alcohol extract upon blood pressure were too high on account of the incomplete previous extraction with ether and the passage of some of the ether-soluble base into the amylic alcohol extract.

When used in equivalent quantities the base soluble in amylic alcohol is a more powerful pressor substance than the base soluble in ether. The injection of the amylic alcohol extract in my cases produced a smaller rise than that of the ether extract, and this is due to the fact that in the urine the former base is much less abundant than the latter.

In all cases before injection the solvent was evaporated off and the residue taken up with normal saline solution and made up to 6 c.c. after neutralisation. A specified portion of this (2 c.c.) was then injected intravascularly in animals—i.e., the amount obtained from two-thirds of a litre of the urine (666 c.c.). The resulting rises of arterial blood pressure can then be accurately compared in the different urines. Pithed cats were invariably used, the injection being made into the external jugular vein; the arterial pressure from the carotid artery was registered in the usual way with a mercurial manometer. I also now, as a matter of routine, make an injection of 1 c.c. of a solution of adrenaline (1 in 10,000); the rise of arterial pressure so produced is remarkably constant and serves as a standard of comparison. The rise produced by an injection of the 2 c.c. of the solution of the ether-soluble base in normal subjects is approximately equal to that produced by the adrenaline, but is sustained for a much longer time. The rise produced by the 2 c.c. of the solution of the base extracted by amylic alcohol is roughly about one quarter of this. Some illustrative tracings and measurements will be given later.

I will now pass to the consideration of results.

Influence of Age.

The urines of four children between the ages of 10 and 12 were examined. In these both the bases were absent. The urine of a boy of 14 gave with the ethereal extract a suspicion of a rise. This was rather more pronounced in the case of a boy a year older; but in both these urines the amylic alcohol extracts had no effect whatever. This confirms what I previously stated—that the absence of the bases from the urine of children is one of the characteristics of early life; the excretion of such bases commences about the age of 14 or 15. At the other extreme of life, provided the person lives generously and has a normal blood pressure, the bases are present exactly as they are in the prime of life.

Influence of Diet.

In a previous investigation it was noted that the substitution of a milk and biscuit diet for an ordinary one did not markedly affect the formation of the bases, and that medicinal doses of antiseptics administered by the mouth made no appreciable difference in the amount of these basic products of protein putrefaction which is excreted in the urine.

The influence of diet is, however, an important factor, and so I have extended this branch of the research and examined my own urine after diets of different kinds. On a low diet consisting of vegetables and fruit one finds the amount of pressor bases in the urine greatly lessened. In many cases of high blood pressure the patients are on a low diet, and the diminution of the pressor bases in their urine might therefore simply be a result of their diet; at any rate, this factor has to be eliminated. We shall, however, find that the characteristic diminution or disappearance of the pressor bases in cases of high blood pressure is not a mere question of dieting.

Before commencing dieting I took a couple of compound rhubarb pills to ensure a satisfactory evacuation of the bowels, and at each change of diet the same precaution was taken. Each diet was kept up for six days, and the collection of the two necessary litres of urine was made during the last day or two of dieting. While dieting the same amount of exercise was taken daily.

The diets employed were the following:—

A. *Vegetables and fruit diet.*—Breakfast: porridge and treacle; a cup of coffee without milk, toast without butter. Luncheon: potatoes and cabbage, tomato ketchup, dry toast, apple and banana, equal parts of ginger ale and soda-water. Afternoon tea: one cup without milk and three oatmeal biscuits. Dinner: same as luncheon, and one cup of coffee without milk afterwards.

B. The same as the above, but six eggs were added to it daily.

C. The same, except that fish three times a day was taken instead of the eggs.

D. The same, except that a whole chicken daily replaced the fish.

The A diet (vegetables and fruit) was taken for two periods, but during one of these milk was added to tea (two cups) and coffee. A cup of coffee with milk was also taken after luncheon.

The following figures give in millimetres of mercury the rise of arterial blood pressure in pithed cats produced by injecting the bases (Base 1 soluble in ether, and Base 2 soluble in amylic alcohol) obtained from 666 c.c. of urine (2 c.c. of the final solutions injected).

Diet.	Base 1.	Base 2.
1. Diet A (vegetables and fruit) ...	30 mm. Hg	3 mm. Hg.
2. Diet A (plus milk in tea and coffee)	49 ,, ,, ...	6 ,, ,,
3. Diet B (6 eggs added to Diet A)	116 ,, ,, ...	16 ,, ,,
4. Diet C (fish added to Diet A) ...	122 ,, ,, ...	42 ,, ,,
5. Diet D (chicken added to Diet A)	160 ,, ,, ...	36 ,, ,,
6. Ordinary mixed diet	164 ,, ,, ...	40 ,, ,,

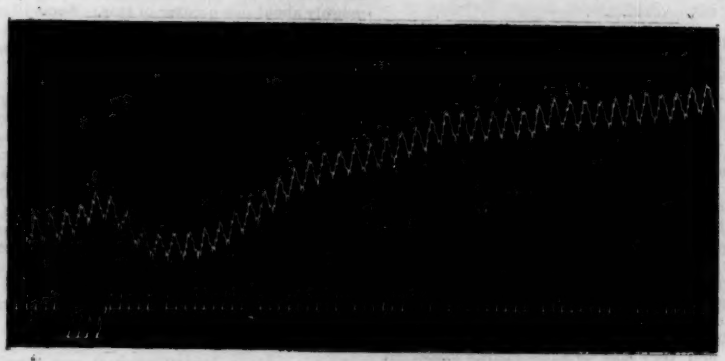
The average rise of pressure produced by the injection of 1 c.c. of adrenaline (1 part in 10,000) was 166 mm. Hg.

[1] THE LANCET, August 7th, 1909, and April 30th, 1910.

The table shows the great diminution produced in the excretion of bases by a vegetable diet; the amount is quite appreciably increased by the addition of the small amount of milk to the tea and coffee taken. The more the protein ingested the greater is the yield of bases, until, with a chicken diet, the result is almost equal to that obtained with a diet containing butcher's meat. It should be mentioned that the writer is not partial to beef or mutton.

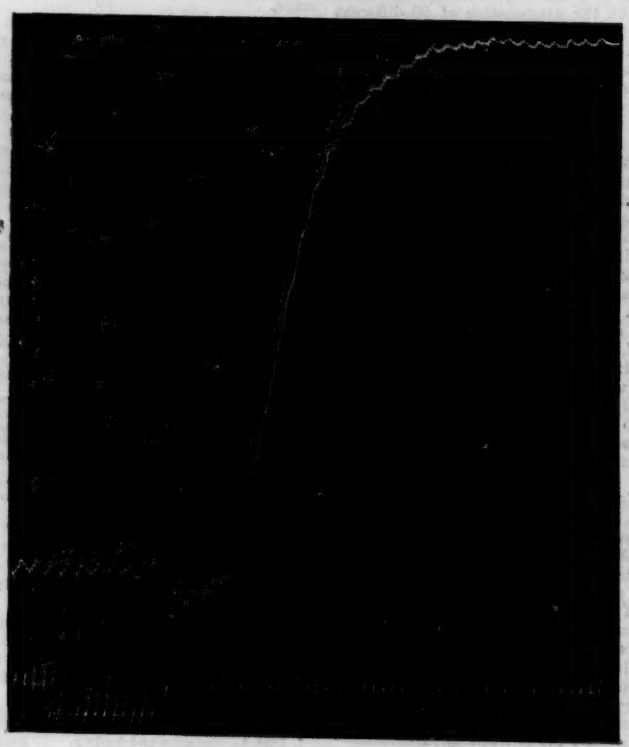
The two accompanying tracings (Figs. 1 and 2) are given as they appeal to the eye better than a table of figures. They show the effect of the first base (the one soluble in ether) on the pressure of a pithed cat (Fig. 1) when Diet A (vegetables and fruit) was taken, and Fig. 2 when chicken was added to it (Diet D).

FIG. 1.



Rise of pressure produced on pithed cat by the ether-soluble base, from the urine collected during a vegetable diet. The time tracing marks seconds, and the fall of level in this tracing indicates the period during which the injection was made.

FIG. 2.



Tracing obtained in the same way, the urine being collected during the chicken diet.

Cases of High Blood Pressure.

It will be convenient to give first a few essential clinical details of the individual cases before drawing general conclusions.

CASE H.—Age 46. Well developed, with a florid complexion. Gouty deposits were present. When this patient first came under observation his urine contained a trace of albumin, the specific gravity being 1022. Ten days later, when the two litres of urine were collected, it was free from albumin. His usual diet was:—Breakfast: fish, bacon, and eggs. Luncheon: fish, grilled chop, vegetables, milk pudding, and stewed fruit. Dinner: soup, fish, joint, vegetables, fruit. As already noted, the question of diet is important. Blood pressure, 206 mm. Hg. The ethereal extract only gave a very moderate rise, less than with Diet A; amylic alcohol extract, *nil*.

CASE F.—Age 25. Had albuminuria and subsequently developed albuminuric retinitis. Blood pressure, 220 mm. Hg. The ethereal extract gave a slight rise; amylic alcohol extract, *nil*.

CASE G.—Age 72. Gouty; had apoplexy two years ago. During the last four years, when I have seen him from time to time, his urine was free from albumin until last year when he contracted a "chill," but the albumin disappeared in a few months. This patient is strictly dieted. His blood pressure varied from 180 to 240 mm. Hg. The ethereal extract gave a slight rise, the amylic alcohol extract *nil*.

CASE H.—Age 52. Total abstainer, but lives well; florid complexion. This lady is gouty, and her urine occasionally contains albumin, but there was no trace of albumin in the sample examined for the pressor bases. Her blood pressure varied from 180 to 245 mm. Hg. Both bases were absent.

CASE I.—Age 35. (Dr. Buckley's patient.) She suffered from nervous depression, and had an obsession that she must be constantly washing herself. Dr. Buckley wrote, after I received the sample of urine, that a trace of albumin had appeared for the first time. The urine examined contained none. Blood pressure, 210 mm. Hg. The ethereal extract only gave a very moderate rise, the amylic alcohol extract *nil*.

CASE J.—Age 71. (Dr. Hill Joseph's patient.) Has had apoplexy. The urine contained a trace of albumin. Blood pressure, 242 mm. Hg. Both bases absent.

CASE K.—Age 60. (Dr. Hill Joseph's patient.) Syphilitic. His urine at one time contained 5·2 grains of sugar to the ounce. The specimen sent to me was free from albumin and sugar. Blood pressure, 160 mm. Hg. The ethereal extract gave a slight rise, the amylic alcohol *nil*.

CASE L.—Age 30. Well developed; neurotic. She complained of pain in the coccyx, and has had many and varied forms of treatment without relieving the pain. Blood pressure was taken repeatedly, and was always about 160 mm. Hg. The bases were considerably diminished. Three months later her urine was again examined with the same result. I regarded the case at one time as purely neurotic, but the diminution of pressor bases indicates there was something behind the neurosis.

CASE M.—Age 62. Gouty. This patient did not take butcher's meat, but otherwise lived well. His general health was excellent. His arteries were considerably thickened, and the blood pressure reading was 180 mm. Hg. Both extracts gave very fair rises, about equal to that produced in my own case by an egg diet. This is the only case of high blood pressure where I got anything approaching normal pressor effects from the urine, and I am inclined to question the accuracy of the sphygmomanometer reading, the thickened arteries preventing a true record of the pressure being obtained.

Excluding the last of these nine cases from consideration for the reason mentioned, we see that they resemble each other in being cases of high blood pressure, and in all the base soluble in amylic alcohol was absent, and the base soluble in ether was either absent or present in greatly diminished quantities. In those cases where I have notes of the diet it will be seen that low diet will not explain the condition. Cases E and H both lived very well. The lady referred to as Case H was about my own age, and I injected the extracts from my

own urine and hers in the same pithed cat. The result was very striking, my own extracts giving the usual high rises of arterial pressure, and hers had absolutely no effect at all.

"Strict dieting" in relation to such cases usually means the mere avoidance of butcher's meat; replacing this by fish or chicken in a healthy person makes, as we have seen, very little difference in the amount of pressor bases excreted.

Cases of Gout.

In my last paper the belief was expressed that there is no direct relationship between gout *per se* and the retention of pressor bases. This conviction was based upon the examination of only a few cases, but it is now confirmed by subsequent work. If gout is complicated by a high blood pressure there is retention or non-elimination of the bases, but this is due to factors not yet determined. A few of the cases already described (E, G, H) will be seen to be gouty, but gout may occur without any accompanying rise of arterial pressure, and in such cases the urine contains the usual pressor bases in normal amounts. The following four typical cases of gout will illustrate this:—

CASE A.—Age 53. Always lived well and took a large amount of alcohol. He had four acute attacks of gout during the previous four months. The urine was free from albumin. Blood pressure, 103 mm. Hg. The urinary extracts gave normal rises.

In connexion with this case it is interesting to note that after the last attack he became a teetotaler for a prolonged period, and some months after abstention from alcohol his blood pressure rose to 115 mm. This is not an isolated experience.

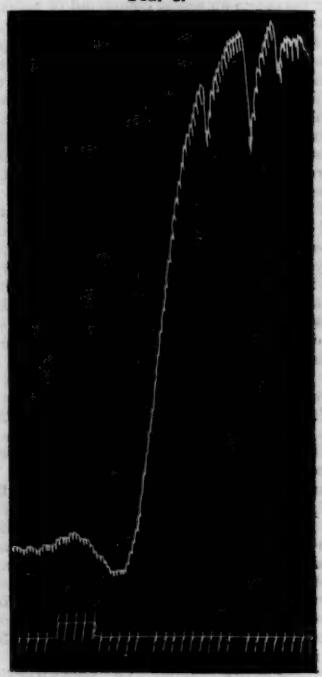
CASE B.—Age 54. Had repeated attacks of gout in the last ten years. Blood pressure, 140 mm. Hg. At the time of observation he was recovering from an acute attack, his left foot being still much swollen. The urine was collected subsequently, and the extracts gave normal rises of blood pressure. Six months later his blood pressure was 110.

CASE C.—Age 48. Led an abstemious life. His blood pressure taken during convalescence from an acute attack was 140 mm. Hg. The urine was collected later, and the bases were present in their normal quantities.

CASE D.—Age 64. Never had an acute attack, but had numerous tophi, one of which, over the right external malleolus, was subsequently removed. His blood pressure was 122 mm. Hg, and the extracts of his urine gave normal rises of arterial pressure.

Fig. 3 is the tracing obtained with the ether extract of the urine in Case D. It is of interest, as it illustrates

FIG. 3.



Effect on cat's arterial pressure of the ether-soluble base obtained from Case D, described in the text.

not only that in a case of gout one may obtain a perfectly normal effect, but it also shows that in an elderly person, provided the blood pressure is normal, the urine has in this connexion the same properties as in younger adults.

I may add that in my previous work most of the pathological urines were collected from workhouse infirmary patients, and so low diet may account in part for the less pronounced effects observed. With the exception of the four children between the ages of 10 and 12, all the urines referred to in the present paper, both physiological and pathological, were obtained from the well-to-do classes.

General Conclusions.

1. Pressor bases are absent from the urine of children between 10 and 12 years of age, and apparently begin to be excreted about the age of 14.

2. A vegetable diet considerably reduces the amount formed. Eggs and fish reduce the quantity to some extent, but if chicken is taken the amount is but little less than one obtains on an ordinary mixed diet containing butcher's meat.

3. The bases are either absent or considerably diminished in cases of high blood pressure. Doubtless the diminution in some cases is partially attributable to low dietary, but in most of the cases recorded in this paper the only possible explanation is that the bases are retained in the system and produce the rise in pressure.

4. In gouty patients with normal blood pressure the pressor bases are excreted in normal amounts.

I have to thank Dr. C. W. Buckley, Dr. W. S. Colman, Dr. A. Hill Joseph, and Dr. W. E. Sawers Scott for their kindness in providing me with some of the specimens and notes of their cases. It gives me great pleasure to express my indebtedness to Professor W. D. Halliburton and Dr. Otto Rosenheim for suggestive help during the research.

Harrogate.

ON THE NATURE OF THE CONNEXION BETWEEN ERYTHEMATA AND LESIONS OF JOINTS.

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PAINFUL affections of joints and eruptions of the erythema group are so frequently met with in association that it can hardly be doubted that some close connexion exists between them. The fact that both classes of lesions are met with in the course of attacks of rheumatic fever suggests that where they occur together both are of rheumatic origin, but a further study shows that such an explanation does not suffice, and that we are not justified in assuming that the arthritis which accompanies an erythema is always rheumatic. It would rather seem that these allied affections may have their origin in a number of different causes. Even in rheumatic fever the marginate and papular erythematous rashes, which are, perhaps, commoner in children than in adults, are more closely associated with the articular than with the cardiac manifestations of the disease, whereas some other rheumatic accidents, such as chorea and subcutaneous nodules, group themselves around the endocardial and pericardial lesions.

Such associated lesions of skin and joints are also seen in cases of erythema nodosum, but the nosological position of this variety of erythema is open to doubt, and the pains which accompany it are by no means always articular. Whereas many ascribe to it a rheumatic origin, it is regarded by others as a distinct specific malady. Undoubtedly erythema nodosum is far less often seen in the course of unequivocal attacks of rheumatism than are the marginate and papular forms, and case after case presents itself in which the malady runs its course without implicating the heart, and this even in children who, as a class, show so great a liability to the cardiac accidents of rheumatism. However, just when the suspicion of its distinct nature, engendered by the observation of a series of such cases, is growing into conviction one is apt to be confronted with a case in which erythema nodosum appears as an integral part of the complete rheumatic symptom-complex, and is obliged to reconstruct one's notions accordingly.

If erythema nodosum be a distinct malady it affords an example of the clinical association of an erythema with lesions of joints other than rheumatic; if, on the other hand, it be a manifestation of rheumatism, it illustrates the association of the erythemata with its articular rather than

with its cardiac accidents. Again, in the majority of cases in which the diagnosis of peliosis rheumatica is made, the pains in and swellings of joints which accompany a hæmorrhagic erythema are the sole indications of a rheumatic origin; but it is difficult to assign any exact meaning to the term in question, and not a few of the earlier descriptions of peliosis rheumatica undoubtedly refer to erythema nodosum.

Pains in joints figure largely also in the syndrome known as Henoch's purpura, in association with a hæmorrhagic erythema rather than a petechial purpura, with paroxysmal abdominal pain, and in some cases with a nephritis. The abdominal pain, on account of which laparotomy has been performed in some cases, is due to a condition of the intestinal wall of like nature with the cutaneous eruption. Indeed, as Professor Osler [1] and others have pointed out, such paroxysms of abdominal pain may accompany erythemata of various kinds. That Henoch's purpura is of rheumatic nature has hardly been suggested.

It is not improbable that the arthritis which accompanies erythemata is, like the intestinal lesions, of a similar essential nature with the rashes, for its characters are such as might be expected to be manifested by an inflammatory œdema of the articular structures.

Just as the eruptions of the erythematous and urticarial groups are fugitive and subside quickly, leaving behind them no signs of their passage beyond some staining by extravasated blood, so also the lesions of joints which accompany them are fugitive, and inflict no lasting damage upon the structures which they implicate. This is a familiar characteristic of the arthritis of acute rheumatism, which is distinguished, by its fleeting visitations and by its tendency to shift from joint to joint, from most other forms of arthritis which develop in the course of infective maladies.

Schlesinger [2] has advanced the view that the curious and rare affection known as intermittent hydrarthrosis, in which effusion into joints, usually the knees, recurs at intervals so regular that the patients can as a rule predict to the day, or even the hour, the time of its recurrence, is a form of hydrops hypostrophos—in other words, a variety of acute circumscribed œdema. To all intents and purposes it is the aim of this communication to extend this theory over a much wider field.

Circumscribed œdema sometimes recurs at regular intervals, and some of the symptoms which are met with in association with it sometimes accompany intermittent hydrarthrosis. Some of the victims of the intermittent joint affection have been subject to urticaria, and some have at some period exhibited circumscribed œdema. In a case recently recorded by me [3] this connexion was better marked than in any previously recorded example, for during a considerable period each recurrence of the periodic hydrarthrosis was attended by circumscribed œdema either of the lips or eyelids, so that an intimate relationship between the two phenomena appeared hardly open to doubt. Lastly, the rapid development and equally rapid subsidence of a conspicuous synovial effusion; the fact that when the attacks have not been too numerous the affected joints recover completely in the intervals; and the effect of energetic local treatment of the joint, which has been followed in some cases by transference of the trouble to another articulation previously immune, are consistent with Schlesinger's views. Nevertheless, it must be admitted that circumscribed œdema is seldom regularly periodic, and that in most cases of intermittent hydrarthrosis there is no associated superficial œdema.

There is little doubt that erythematous and urticarial rashes are usually of toxic origin, as witness their development in some individuals after taking certain articles of diet or drugs, or as the results of stings of insects or of nettles, or of contact with caterpillars of certain species. We must suppose, therefore, that if the views here advocated be correct, the lesions of joints which accompany them are likewise due to toxic influences working at a distance rather than to bacterial invasion of the articular structures. Such a view of the origin of some forms of arthritis has recently been advocated by Dr. Campbell McClure,[4] who adduces in its support the occurrence of painful swellings of joints after injections of sterile sera, as part of the clinical syndrome known as serum disease. That such arthritis is due to toxic substances can hardly be questioned.

But an erythematous rash is as characteristic a feature of serum fever as is the affection of the joints; and here we have the strongest evidence which can be adduced in support of my initial thesis, in a simultaneous affection of skin and joints under conditions which exclude a rheumatic origin of either.

If the views here advocated be correct, they may possibly serve to throw some light upon the action of the salicylates in cases of rheumatic fever; upon their conspicuous influence upon the febrile disturbance and articular lesions, and as some think upon the erythemata also, and their apparent failure, when given in moderate doses at any rate, to control the cardiac accidents of the disease. Can it be that they exercise an antitoxic rather than a bactericidal action? It must be granted that, as Professor Stockman has pointed out to me, such a conception finds no support in the established facts of pharmacology, and that no parallel example can be quoted of a neutralising effect of a simple chemical compound, administered as a drug, upon bacterial toxins; but neither can any other instance be adduced of such selective influence of a drug upon certain of the manifestations of a disease of bacterial origin.

Chandos-street, W.

[1] American Journal of Medical Sciences, vol. cxxvii., p. 1, 1904.
[2] Die intermittirenden Gelenkschwellungen, Nothnagel's Specielle Pathologie und Therapie, 1903, Band vii., 3 Theil, Anhang.
[3] Quarterly Journal of Medicine, vol. iii., p. 207, 1910.
[4] Ibid., vol. iii., p. 61, 1909.

SALVARSAN IN THE TREATMENT OF SYPHILIS.

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THE value of arsenic in the treatment of syphilis has long been recognised. With the progress of synthetic chemistry it was but natural that new arsenical derivatives should be produced, and that they should be tried in cases of syphilis. Some four years ago an anilin compound of arsenic known as atoxyl was employed by Uhlenhuth in the treatment of lues, after he had tested its efficacy in cases of fowl spirillosis. The remedy was subsequently used by Hallopeau of Paris, who extolled it highly, and for a time it had a considerable vogue. In spite of its name, however, atoxyl was found to have highly poisonous qualities, and in especial to exert a most prejudicial effect upon the optic nerve; and as a result of its use several cases of optic atrophy with incurable blindness occurred. As a substitute arsacetin was suggested, this product being atoxyl plus an acetyl group of molecules—an acetylised atoxyl in fact. Ehrlich, Browning, and Salmon conducted experiments which proved that the addition of the acetyl group rendered arsacetin three to five times less toxic than atoxyl, while its destructive power over trypanosomes was much increased. But even arsacetin was found to have unpleasant by-effects, and Ehrlich and his collaborators set themselves by patient and systematic work to elaborate an arsenical derivative which should have a high degree of toxicity for spirilla and a very low degree of toxicity for the body cells. Their aim was to discover a powerfully parasito-tropic product, with a low degree of organo-tropic power. Their researches culminated in the discovery of salvarsan, or "606"—so-called because it was the 606th derivative of the atoxyl group which was systematically investigated by Ehrlich and his colleagues.

Salvarsan, or dioxydiamidoarsenobenzol, has the formula $C_{12}H_{12}O_2N_2As_2$, and is put upon the market as a hydrochloride to ensure its greater stability. It is a sulphur-coloured amorphous powder, with a slightly bitter taste and a faint aromatic odour. It is readily soluble in water and alcohol. It is supplied in closed and exhausted glass bulbs, which should never be opened until it is about to be used, as exposure to the air may lead to oxidation and the formation of arsenious acid. As salvarsan contains about 34 per cent. of arsenic it will readily be seen that if a bulb containing the average dose of 0·6 gramme—i.e., about 9 grains—should be left unsealed and oxidation take place, about 3 grains of arsenious acid—enough to poison several people—will be produced. All solutions of salvarsan therefore should be prepared immediately before use, and the bulb should never be opened till its contents are about to be administered

There are two chief routes for the administration of "606"—viz., the intramuscular and the intravenous. The latter is infinitely the better. The intramuscular injection may be administered in sterile olive oil, the dose being rubbed up in 6 c.c. of oil and injected into the buttocks, or, what is better, since Ehrlich has laid great stress upon the special efficacy of "606" when converted into a mono- or di-sodic salt, the drug may be mixed with absolute alcohol, distilled water, and sodium hydrate in definite proportion, and then neutralised by normal acetic acid and injected. The olive oil injection is not very painful, but the emulsion with sodium hydrate gives rise in most cases to intense pain, sometimes amounting to agony, which must be relieved by morphia.

The most efficient method of administering salvarsan is undoubtedly by intravenous injection. This method best fulfils Ehrlich's ideal of striking a sudden and powerful blow at the micro-organism of the disease. The system is flooded with a dilute solution of the drug, which, being introduced into the blood-stream directly, is carried straightway into every blood-vessel in the body except those which are thrombosed or otherwise occluded, and the lethal effect upon the spirochætæ is immediate and far-reaching. Besides this, the method is, to all intents and purposes, painless, and provided that the greatest care is taken to avoid the introduction of air-bubbles or solid particles into the vein the danger is practically *nil*. But, on the other hand, the successful administration of an intravenous injection of salvarsan is not altogether easy of accomplishment. There are innumerable pitfalls lying in wait for the unwary, some of them even long experience cannot avoid, and no one can foretell whether an intravenous injection will go off well till the last drop of salvarsan solution has left the container.

The method of administration.—Following the approved custom, we generally administer an intravenous injection through either the median cephalic or median basilic vein. These veins are rendered turgid by the application of a rubber band round the middle of the upper arm. This should not be sufficiently tight to block the arterial stream. The patient should clench a rolled-up bandage in the hand and help the filling of the veins by making some pumping movements with the fingers. When the veins stand out blue and tense underneath the skin the arm should be laid flat upon a low table brought to the patient's bedside. The patient should be semi-recumbent. The site of operation should be sterilised with tincture of iodine or spirit, and, all being in readiness, and the container being loaded with a few ounces of warm normal saline solution which is flowing through the needle, the needle should be inserted carefully into the lumen of the most prominent vein. (In three cases only have we found it necessary to expose the vein by dissection.) This sounds very easy, but is often very difficult, for the vein may slip away from under the needle, or the needle may enter the vein and accidentally transfix the lateral or posterior wall, or, as sometimes happens, blood may coagulate in the needle and block it.

One is able to tell that the lumen of the vein has been entered (1) by the sense of touch; (2) by the appearance of blood at the little glass window left in the tubing that connects the needle with the container; (3) by the absence of any swelling over the vein when the container is elevated and the normal saline solution is allowed to flow. As soon as it is definitely known that the needle is in the vein the tourniquet should be removed and the salvarsan solution allowed to flow in by hydrostatic pressure. It should be preceded by some ounces of normal saline solution, because if for any reason the needle should not be lying properly in the vein, and some of the fluid escapes into the surrounding cellular tissue, normal saline solution will do a minimum of harm, whereas even dilute salvarsan solution will act as a powerful irritant and set up a troublesome cellulitis. In the same way the salvarsan solution should be followed up by several ounces of normal saline solution, so that the vein wall may be washed free of the irritating drug. The rate at which the injection takes place should vary with the age of the patient. A total amount of 15 oz. of fluid can be introduced comfortably in 15 or 20 minutes in a young adult. The rate of inflow may be controlled by elevating or lowering the container.

The preparation of the solution for intravenous injection.—Adequate instructions are given with each dose of salvarsan issued for its preparation, and to ensure success they should be carefully followed. We prepare our solution as follows. The phial of "606," after being carefully examined to see that it is not cracked, is opened and its contents are sprinkled into a mortar containing an ounce or two of normal saline solution. The normal saline solution should be made with distilled water, or a turbid solution results on the addition of the "606." The powder should be carefully rubbed up with a pestle till all is dissolved, and then from 23 to 25 minims of a 15 per cent. solution of sodium hydrate should be added. This at first throws down a gelatinous-looking precipitate, which, however, quickly dissolves in excess of sodium hydrate, and a clear yellow solution results. This should then be diluted by the addition of normal saline solution till a total bulk of 8 or 10 oz. is obtained. This should then be filtered through a piece of sterile muslin and gently poured into the container once it has been determined that the needle is lying properly in the vein.

The results of an intravenous injection.—During the injection the patient sometimes complains of a sensation of "pins and needles" all over the body. Sometimes this sensation is confined to the arm being operated upon. None of our patients have complained of any actual distress or oppression during an intravenous administration, but one patient, a man over 40 years of age, stated that he felt a little fulness in the head. This passed off when the container was lowered and the rate of inflow lessened. After a variable period, but usually within an hour, the patient begins to feel ill. There is sometimes intense nausea, with occasional vomiting or diarrhœa, there may be a rigor, and the temperature rises two or three degrees. The more acute the infection the more marked is the reaction, and a patient with active secondary lesions will have a much more severe reaction than one with a tertiary ulcer. The reason of this is probably that an immediate destruction of spirochætæ takes place, with the liberation of endotoxins, which flood the system and give rise to this systemic disturbance. In a few hours the temperature falls by crisis, and the patient falls asleep and wakes up feeling very comfortable. Arsenic appears in the urine first passed after the injection, and we have found it in a sample voided 30 minutes after the injection of 6 decigrammes. Its elimination is fairly rapid, reaching its height about the second or third day, and, as a rule, it cannot be discovered with Gutzeit's test after the sixth day. But even after all the arsenic has disappeared from the urine healing continues to progress. This is in all likelihood due to the antibodies that have been produced by the liberation of the endotoxins from the dead spirochætæ, and these antibodies are not eliminated quickly, if at all.

The effects of an injection of salvarsan on syphilitic lesions.—The lesions of syphilis which respond most quickly to "606" are undoubtedly mucous patches in the mouth and throat, and the effect of this remedy on the throat in secondary syphilis can only be compared to the extraordinary effect of antitoxin in diphtheria. We have seen a throat covered with snail-track mucous patches absolutely clear up in 48 hours, while 24 hours after the administration of a full dose a patient with an ulcerated throat and palate, who had previously been almost unable to swallow, declared himself able to "eat a brick." Another syphilitic manifestation in which "606" gives instant relief is the periosteal node, which often gives rise to much distress from nocturnal aching. It has been suggested that, like certain other of the protozoa, the spirochæta pallida is most active at night, and that this explains the nocturnal exacerbation of pain. We recently injected a young man with such a periosteal node upon the tibia, and next day he volunteered the statement that he had no pain in his leg the previous night. With "606" a chancre will disappear completely in from 8 to 14 days. In the first case we treated in private, a young man who had a primary chancre on the lip and a roseolar rash, the chancre was represented by a little fibrous thickening at the end of a week, and the roseolar rash had completely disappeared. This patient received 0·45 gramme in neutral suspension into the buttocks. A papular rash will disappear in ten days or a fortnight, and tertiary ulcers which have withstood all manner of medication for years will begin to heal immediately and go on to complete repair, the length of time required depending upon the amount of tissue which has to be restituted.

In parasyphilitic disease the precise rôle of salvarsan has yet to be established. *A priori* we should expect that it will prove of use in those parasyphilitic conditions which depend

not upon an actual sclerotic degeneration, but are due to the active inflammatory processes which precede the degeneration. In a word, salvarsan is of use in arresting syphilitic processes in the central nervous system which precede degenerative changes; but it cannot restore to their original condition nerve tissues that have undergone sclerotic change. It should be tried, therefore, in all cases of locomotor ataxia which show signs of developing within five years of the initial infection with syphilis, and in all early cases of incipient general paralysis of the insane which give a positive Wassermann's reaction.

The dangers of salvarsan.—In certain quarters in this country a great deal has been made of the possible dangers from the use of salvarsan, and much criticism which we think unjust and many statements which we find unwarranted have been made. The critics would speak with greater force if they adduced evidence from their own experience.

Professor Ehrlich, who during the long months of preliminary investigation which he insisted upon before he would allow "606" to be put upon the market, has throughout acted in a spirit of extreme scientific caution, has laid down certain specific instructions for the use of the drug. It is most wrong to depart from these instructions and blame the drug and its discoverer for any mishap which one may have courted oneself. Even now, when the drug can be purchased in the open market, Ehrlich tests biologically a sample of every issue of "606" which is put upon sale. No man could do more than he has done to ensure the safety of patients upon whom "606" may be tried, and much of the criticism he and his discovery have had directed against them, both in this country and in France, is unfair to our profession.

What are these alleged dangers of which the critics make so much? In the first 20,000 cases treated with "606" about 20 deaths, or 1 per 1000, occurred. This sounds very serious, but the matter assumes a different aspect when we discover that several of these were young infants, some only a few hours old, who received an intramuscular injection, and who died from shock. No one would now think of administering an intramuscular injection to a young infant. In addition, there were several cases of death among patients suffering from advanced general paralysis of the insane, and from the first Ehrlich cautioned the profession not to use "606" in advanced degenerative changes of the central nervous system. Further, there were some deaths due to errors in judgment and technique. For instance, a death resulted from the intravenous injection of 0·4 gramme of "606" dissolved in only 15 c.c. of water. The solution was, at least, ten times too concentrated. There have also been accidents from the intravenous injection of incomplete solutions of "606," but no one who did not wish to court disaster would think of injecting solid particles into the circulation. We have no hesitation in stating that if Ehrlich's instructions are carried out and a careful technique is followed "606" can be administered without any danger whatever of a fatal issue.

Much has been made of the possibility of "606" setting up optic atrophy, as atoxyl has been known to do, resulting in permanent blindness. Before "606" was put upon the market Ehrlich delivered an address at Frankfort on Dec. 8th, 1910, in which he reviewed the results that had followed the use of the 20,000 or 30,000 doses which with a liberal hand he had disseminated broadcast over Europe in the preceding 12 months. He then stated that only one case of optic atrophy had been brought to his notice, and on investigation he found that this case had previously been treated with large doses of arsenical preparations which are known to exert a very toxic influence on the optic nerve. We regard the danger of such a disaster as negligible, especially if "606" is administered by the intravenous route, for the arsenic is all eliminated in the course of a few days.

We are firmly convinced that salvarsan is the most potent remedy for syphilis. We base our opinion upon our own experience and that of others. Of all the cases treated with "606" in the first 12 months after its discovery there have been relapses in only about 25 per cent. This is very remarkable when we remember that in the beginning very much smaller doses were administered than are now the rule, and many of these were intramuscular and hypodermic doses, which are less potent than the intravenous ones. We have been using salvarsan since early in November, 1910, when Professor Ehrlich kindly sent us a supply for experimental purposes, and so far we have not administered more than one dose to any patient, and we have not seen a single relapse follow its use.

Neisser has shown by experiments upon apes that it is possible to cure an ape of an attack of syphilis by administering salvarsan and then to reinoculate it with syphilis, and though we do not lay too great stress upon the value of a negative Wassermann's reaction it is a fact that in a very large proportion of cases a positive Wassermann's reaction is converted into a negative one after a full dose of "606." We understand that at the Military Hospital in Rochester-row, when two intravenous injections are given at an interval of eight or nine days a negative Wassermann's reaction is the rule when a patient leaves the hospital. On these grounds, therefore, we may take it that salvarsan can cure syphilis.

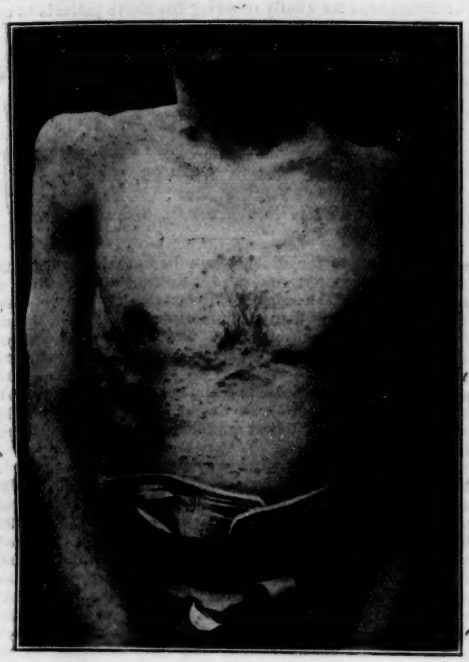
A few short notes of some of our cases may be of interest. We have used the remedy in 28 cases; of these, 25 were male and 3 female; 18 were injected intravenously and 10 intramuscularly, 4 of the latter receiving injections in oil and the other 6 receiving the neutralised sodium-hydrate emulsion. Our best results, immediate and remote, have been obtained by the intravenous injections, our next best in the case of the neutral suspension, and our slowest results have followed the injections made with oil. In one week by the intravenous method we can secure a result which is only attained after three weeks if the dose is administered intramuscularly in oil. Every case we have treated has responded, and in some cases the response has been so remarkable as to surprise us. We have treated syphilis in all its stages, and in each have found salvarsan to possess remarkable efficacy. The most severe reactions after its use have, naturally, been met with in cases in which the disease was in full efflorescence. We have had no disasters or accidents, and are confident that with a careful technique and due observation of Ehrlich's instructions they should not occur. We shall quote only a few cases.

CASE 1.—A married woman, aged 53 years. Tertiary ulcer of leg. There was in this case no history of primary or secondary infection, and no miscarriages, but the patient had suffered for about two years from a large tertiary ulcer on the left leg. The patient had been in bed for several weeks, and had been receiving large doses of potassium iodide, 10 grains thrice daily for five months, without definite improvement. When the ulcer had been cleaned an attempt was made to skin-graft it, and for this purpose cuticular grafts were removed from the thigh. But the woman's system was so thoroughly syphilised that a large punched-out ulcer developed at the place whence the grafts had been removed, so slight an amount of damage being capable of determining a syphilitic sore. On Feb. 23rd a dose of 0·6 gramme of salvarsan in olive oil was injected into the buttocks. Arsenic was found in the first urine passed six hours after the injection. In 48 hours there was a noticeable change in both ulcers; the one on the thigh had lost its sloughy base, and healthy granulations were beginning to appear, while the epithelium round the edge of the ulcer on the leg was beginning to spread inwards. In a week the ulcer on the thigh was one-fourth its size, and the ulcer on the leg covered less than half its original area. In a fortnight both had healed, but at the lower part of the ulcer on the leg there had been a partial breakdown, but this was only temporary, for recovery began again and the healing process proceeded uninterruptedly.

CASE 2.—A male patient, aged 42 years. Infected in 1891 and never efficiently treated. For the last 18 months had suffered from severe syphilitic glossitis; the tongue had been enlarged and very painful, so that speech and mastication were interfered with; the dorsum was raw and cracked, and the border was ulcerated. He was sent to us in January of this year. When seen the patient had a scrotal tongue, cut up by deep fissures. The segments of the tongue between the cracks were glazed and angry-looking, and here and there were several small sloughs. On the right border of the tongue near the root was an oval ulcer about three-quarters of an inch long with sloughy and unhealthy edges. Wassermann's reaction positive. On Feb. 3rd the patient received 0·5 gramme of "606" intravenously. Four hours afterwards the temperature was 100° F. In 48 hours there was an appreciable improvement in the appearance of the tongue. The ulcer along the border had almost completely healed; the whole organ looked smaller, the fissures were less deep, and the small sloughs had disappeared from the dorsum. The patient could speak with much greater ease and eat without pain. On the fourth day the denuded areas on the dorsum of the tongue were completely covered with a sheet of healthy epithelium. Arsenic was present in the first urine passed after the injection and disappeared on the sixth day. On March 24th Wassermann's reaction was negative.

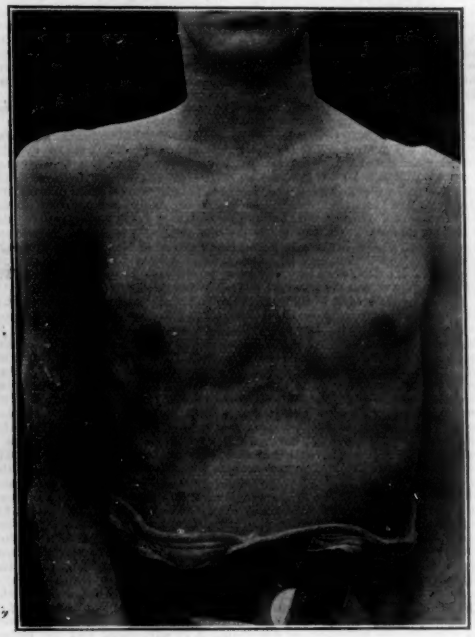
CASE 3.—A male patient, aged 27 years. Infected two years ago. The infection was a severe one, and the patient had tertiary ulcers in less than 12 months after infection. When seen by us he had lost his left tonsil through ulceration, and the right tonsil and soft palate were the site of a large excavating ulcer with a sloughing base. The surrounding tissues were in a state of great inflammation, swallowing was very painful, and perforation of the soft palate seemed imminent. On Jan. 25th he received an intravenous injection of 0·6 gramme of "606." Next morning he swallowed his breakfast comfortably, and the inflammation had begun to subside. By the eighth day complete healing had taken place, and a slight degree of albuminuria present before the injection had disappeared. By March 13th he had gained 8 lb. in weight, looked

FIG. 1.



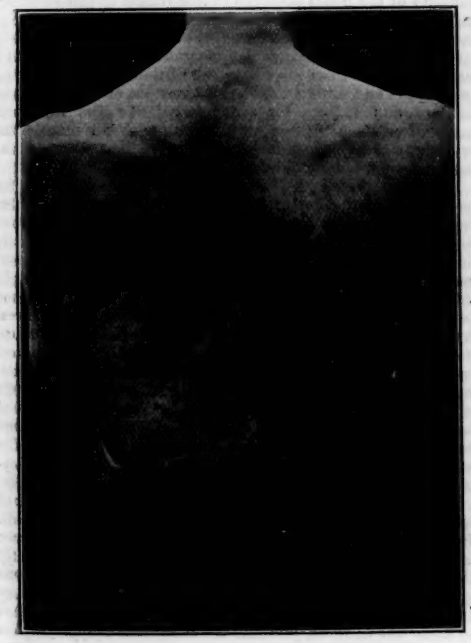
Before treatment.

FIG. 2.



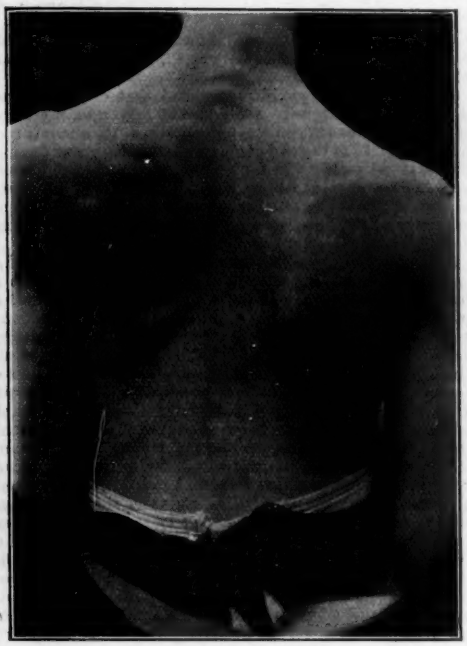
Ten days after treatment with salvarsan.

FIG. 3.



Before treatment.

FIG. 4.



Ten days after treatment with salvarsan.

less anæmic, felt very well, and had had no further evidence of syphilis.

CASE 4.—A male patient, aged 27 years. Infected extra-genitally on finger three years ago. Had been under mercurial treatment in America ever since. Had had severe and extensive tertiary ulcers of the legs and arms. When seen by us he was suffering from ulceration of the hard and soft palate, both of which were ploughed up by sloughing ulcers which extended as far as the alveolar border. Speech and mastication were very painful. On Feb. 28th we administered an intravenous injection of 0·6 gramme of "606." The day after the injection the patient stated that he could eat with comfort, and in 13 days the ulcers were completely and soundly healed. The scars on the legs and arms had also become much paler. The patient had put on weight and was less anæmic.

CASE 5.—A male patient, aged 25 years. Suffering from a primary chancre at frænum and a copious maculo-papular rash, with a general adenitis. On Dec. 29th, 1910, we administered an injection of 0·6 gramme of "606" intravenously. The same evening there was a severe reaction, with vomiting, and the temperature rose to 102° F. In 24 hours the rash had begun to fade and the chancre felt softer. There was a large quantity of arsenic in the urine the day after the injection, and it had completely disappeared on the fourth day, by which time the rash had almost gone, being represented by a few macules. On the tenth day the patient presented the appearance shown in the illustrations, and the chancre was represented by a slight fibrous thickening. There has been no further symptom. (see Figs. 1, 2, 3, and 4, showing this case before and after treatment. The photographs were taken at an interval of ten days.)

CASE 6.—This case is remarkable as showing the immediate effect of salvarsan on nocturnal periosteal pain. A medical man, aged 34 years, contracted syphilis in January, 1908. In March of the same year he had a secondary eruption with ulceration of the throat. He was under treatment with hydrarg. c. creta gr. ii. thrice daily, but in May his pharynx and larynx were "one complete sloughing surface." He then began to be treated with intramuscular injections of grey oil, receiving the equivalent of ½ grain of metallic mercury every fortnight. This caused the ulceration of the throat to heal up, but in July, in spite of treatment, he had a large number of rupial sores which persisted for six months—viz., till January, 1909. In August, 1909, there was a return of the pharyngeal ulceration, and he then received six weekly injections of grey oil. The patient was free from any symptoms of the disease till March, 1910, when the ulceration of the pharynx and naso-pharynx returned. He again received a course of injections of grey oil. In November he developed otitis media with mastoiditis, for which the complete mastoid operation was performed. In December there was more ulceration of the pharynx and he received a further course of injections with grey oil, the last injection being administered on Jan. 7th, 1911. In February he had ulceration of the pharynx, headache on the left side of face and head, with a boring pain, worse at night, on the surface of the bones of the upper jaw, and boring pain at the back of the orbit. He felt tired and done and had no energy. On March 27th he received an intravenous injection of 0·6 gramme of salvarsan, and his subsequent experiences we give in his own words: "Intravenous injection of '606' at 12.30 P.M. Felt prick of needle; no discomfort after. The bowels moved twice, 6 P.M. and 9 P.M.; very loose; no tenesmus; meteorism. Peristalsis could be felt all afternoon and evening, especially in upper part of abdomen; mouthful of 'water-brash' once. *Usual headache which started between 8 and 10 p.m. never arrived.* and I fell asleep waiting for it. March 28th: Woke this morning with sense of relief on left side of head, as if all the passages and sinuses were clear and well aerated. No feeling of distension or blockage. Ate breakfast and swallowed with no discomfort whatever."

Our records contain several other cases in which symptomatic improvement was equally rapid, and we have had no relapses.

In conclusion, we would recommend that every fresh case of syphilis should receive a full dose of salvarsan, preferably by the intravenous route, unless there is some contra-indication. If at the end of three weeks the patient does not give a negative Wassermann's reaction the advisability of a second dose should be considered. The first dose will destroy an enormous number of spirochætæ, even if it does not accomplish the *sterilisatio magna* which was Ehrlich's aim; the second should complete the work.

It has been suggested that there may be a special breed of arsenic-resisting spirochætæ, and it is just possible that as the human organism will grow accustomed to arsenic, so some of the spirochætæ may develop arsenic-resisting properties in cases in which very slow absorption is taking place from an intramuscular injection. In these cases the advisability of following up the salvarsan with a course of mercury or potassium iodide may be considered, for it is a pity to discard absolutely such old and trusted friends, and probably those parasites which have acquired powers of resisting arsenic will be wiped out by mercury or the iodides. In the same way, in old cases of syphilis, treated carefully with mercury or the iodides, but in which from time to time relapses occur, salvarsan is very strongly indicated. The spirochætæ may have become more or less immune to the action of these remedies, but if the system is flooded with a solution of "606" the probability is that the new remedy will act like a sudden reinforcement of an army which enables it to overwhelm its enemies. And as a matter of caution it is worth considering the advisability of giving all old syphilitic patients a dose of salvarsan to rid their system of any lurking spirochætæ which may be lying quiescent in unseen foci, ready to wake into activity in a man's middle life to remind him of the forgotten past.

Note.—We are indebted to Mr. R. C. Dun, Dr. T. Stevenson, and Dr. T. R. Williams of Liverpool, and Mr. Sidney Wilkinson of Birkenhead for kindly referring the above patients to us.

A CASE OF SPONTANEOUS FRACTURE OF THE LEG BONES, OF DOUBTFUL NATURE, POSSIBLY ONE OF MYCOTIC INFECTION.

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I VENTURE to record this case because it presents many remarkable features, and also because, after reading the accounts in French surgical literature of certain newly described forms of mycotic infection, I think that this may be an example of one of these. When a case or a specimen does not accord with any known system of classification there is an inevitable tendency to set it aside because both clinical and museum teaching aim rather at setting forth the things we know than those we do not. And yet it is by a study of hitherto unsolved problems that our knowledge is likely to grow.

The patient, aged 30 years, was a seaman in the navy. As to past history, he thought he had syphilis in 1902. He had a sore and a rash, but he got well with a few months' treatment and had been perfectly well since. In April, 1906, he had a swelling on the right shin which was said to be periostitis; for this he was warded in the Royal Naval Hospital. *Whilst he lay in bed* the leg broke, without any apparent cause and causing no pain. After a few weeks in splints the leg readily healed. In June, 1906, whilst dancing, the leg again broke spontaneously, and he came up to the casualty department of the hospital to have it set. He could then move the broken limb so as to demonstrate the mobility of the fracture, without feeling the slightest pain. In July, 1906, he was admitted to the hospital because the leg refused to unite. A well-marked fusiform swelling was situated about six inches above the right ankle. This involved both bones, but chiefly the tibia. Definite mobility of the bones occurred in the region of this swelling. An exploratory operation was done to ascertain the nature of the bony swelling, which was thought probably to be a sarcoma. The microscopical appearance of the section of a fragment taken from the site of the disunion showed nothing but osseous and fibrous tissue. He was put on large doses of mercury and iodides for six months, and the limb was immobilised in a plaster case. For about 18 months the swelling steadily grew larger, the movement between the fragments more marked, and the leg more useless.

In February, 1908, the patient was re-admitted for amputation of the leg at his own earnest request. At this time there was a very prominent tumour of the lower part of the right leg, irregular and bossy in outline and clearly involving both bones. When he walked the lower fragment bent so much inwards that he felt very insecure. The right tibia was two inches shorter than the left, having been absorbed to this extent at the seat of fracture. His general physique was that of a man in the most robust health. Professor Michell Clarke kindly examined him for me, and reported that there was nothing abnormal about his nervous system. The knee-jerks were a little exaggerated. On Feb. 1st, 1908, amputation was performed at the seat of election, a hand's breadth below the knee. The wound healed by first intention and he made a rapid recovery. The patient has remained in good health and in active employment ever since—i.e., for three years.

Description of the specimen.—A careful dissection showed that the soft parts were not involved by the tumour at all. They were therefore removed by maceration, and the two bones were cut down the middle. Both bones were greatly thickened by a process of periosteal osteo-sclerosis. At the region of the tumour each bone was expanded in a very irregular manner. At the point of greatest circumference the mass was nodular, just like the margin of a hypertrophic osteo-arthritis. There was a perfectly definite false joint

between the upper and lower parts of the bones. The adjacent bony surfaces were covered by smooth cartilage. The main bulk of the swelling consisted of dense bone, which gradually faded into the thickened shaft above and below.

Microscopical appearance.—If the bone be examined at some little distance from the surface of the false joint it is found to consist of normal bone with a very open cancellous structure. Nearer to the joint it is occupied by a thick zone of tissue containing many osteoblasts and osteoclasts, the latter predominating. The evidence of osteoclasis increases until a zone of dense fibrous tissue is reached, in which are embedded many islets of cartilage. The joint surface is lined by a dense layer of fibro-cartilage which is bounded towards the shaft of the bone by a layer containing blood clot. The periosteum is much thickened, and beneath it are many osteoblasts. Except for the cartilage there is no part of this tissue which does not occur in the process of callus formation at the seat of an ordinary fracture. Especially remarkable is the existence of the tissue containing blood clot in a disease of so chronic a character. The existence of the broad zone of cartilage is similar to that which sometimes takes place in the repair of fractures, especially in animals.

The nature of the disease.—It will be readily seen that this is a case of a very exceptional character. It is explained by none of the recognised causes of spontaneous fracture. In many respects it suggests a trophic disease like tabes or syringomyelia; the spontaneous fracture, the remarkable absence of pain, the following a possible attack of syphilis, and the exuberant outgrowth of bony osteophytes, together with absorption of bone, are all features of a neuropathic osteopathy. But the presence of knee-jerks and the absence of any motor or sensory disturbances must be held to negative this. Might it be an exceptional form of syphilitic osteitis? I think not. For in the first place the evidence of syphilis is very meagre, and as he had had only a few months' treatment he would almost certainly have had some unmistakable late symptoms of the disease. Then the absolute failure of anti-syphilitic treatment to effect the slightest improvement must be accounted for. Moreover, the microscopical appearance is certainly not that of any gummatous disease. Both tuberculosis and neoplasm are negatived by the microscope, and moreover, a new growth would not attack two bones simultaneously whilst the intermediate tissues are left untouched.

Sporotrichosis.—This parasitic disease was first described by Beurmann in 1903, chiefly as affecting the skin and mucous membranes as growths like gummata. In 1909 the same author described[1] five cases in human beings, in all of whom the affection was confined to the tibiæ. It occurs spontaneously in animals also (dogs and rats), forming lesions like hypertrophic osteo-arthritis. The parasitic fungus could be cultivated, the disease artificially produced in susceptible animals by inoculation, and a well-marked agglutination reaction obtained with the blood of affected subjects. The clinical description of all Beurmann's patients is one which so closely resembles tertiary syphilis that, apart from the demonstration of the characteristic fungus, they would certainly have been taken for cases of the latter disease. As far as the osseous lesions were concerned, the chief feature was a periostitis forming a node on the tibia. The microscope, too, revealed, in addition to the various stages of osteitis, many minute aggregations of cells containing the parasite. Moreover, these lesions of sporotrichosis which so closely resemble gummata were readily cured by iodides.

Hemisporosis.—In the end of 1909 Gougerot and Caraven[2] described yet another new form of mycosis affecting the bones. The patient was a man of 25, and the lesion was a localised periosteal swelling of the tibia, which resisted all antisyphilitic remedies. The node was cut open, and from the soft débris removed the hemispora stellata of Vuillemin was grown, and by special staining methods it was discovered in the tissues. Although this fungus closely resembles that of sporotrichosis it is quite distinct from it, and there is an important clinical difference, in that it is not influenced by the administration of iodides.

Gougerot and Caraven also point out in the introduction to their article that no less than three different forms of mycosis have been certainly proved to affect human bones—viz., actinomycosis, blastomycosis, and sporotrichosis, in addition to the new infection by hemisporosis. As all these mycotic bone lesions closely resemble syphilis in their signs and clinical course, and can only be certainly recognised by bacteriological methods, it is highly probable that not only they but also other similar infections have been confused with syphilis. The fact that Beurmann six years after the discovery of the sporotrichosis was able to collect as many as five cases of this disease affecting the bones is strongly in favour of this view. The way in which some of these affections are influenced by the iodides (notably sporotrichosis and actinomycosis) makes their confusion with syphilis still more likely.

It is nearly three years ago since the case I have related was under my care, and unfortunately in the rearrangement of the hospital museum both the specimen and the paraffin block from which the section was cut were lost. Therefore I have been unable to carry out any further tests to find out whether it contained any mycotic parasite. The facts that the bones of the leg only were affected, that the course of the disease was slow and painless, that the new bone presented coincident absorption and proliferation, all make it resemble the mycotic infections. The occurrence of spontaneous fracture was a unique event, but the subsequent false joint is strongly suggestive of the hypertrophic osteo-arthritis caused by sporotrichosis in animals.

Our knowledge of the pathology of bone diseases is so scanty, and our methods of clinical diagnosis in this field are so crude, that every exceptional case ought to be examined in the light of recent bacteriological discoveries, in order that more information may be gained.

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[1] Revue de Chirurgie, 1909, No. 39, p. 661.
[2] Ibid., 1909, No. 40, p. 896.

ACUTE, OR PAROXYSMAL, PULMONARY ŒDEMA.

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THE attacks which characterise the two cases reported below appear to be of identical nature with those described in a recent paper by Dr. Stengel[1] of Philadelphia, under the title "Paroxysmal Pulmonary Œdema." There is an absence of the profuse flow of mucus from mouth and nose which forms such a striking feature in the cases of acute pulmonary œdema described in this country by Dr. Lindsay Steven,[2] Mr. T. Lissaman,[3] and Dr. Leonard Williams,[4] but in other respects the conditions are similar, and Stengel draws no distinction between them. It may be, then, that such difference as exists is one merely of degree; but it is nevertheless difficult to feel confident that the underlying pathological processes are essentially the same.

As observed in the cases now recorded the typical attack commences with a short frequent cough of a peculiarly irritating character, the patient experiencing an urgent desire to "clear the throat." At the same time there is a sense of oppression or constriction across the upper part of the chest, which is usually accompanied by pain in the left arm or "across the shoulders." Within a few minutes the breathing becomes difficult, there is expectoration of a little frothy mucus, which may be brightly tinged with blood, and the general condition becomes one of restless anxiety. Rapidly the patient passes into a state of intense distress. No longer able to exert himself he collapses on to a couch or chair; the face is pallid, the lips blue, and the body bathed in a cold sweat. The pulse is frequent, the respirations rise to 40 or more to the minute, mucus rattles in the throat, and consciousness is sometimes lost. To the onlooker a fatal termination appears to be immediately impending; but after persisting for from two to four hours the symptoms gradually abate, and presently the patient sinks into a sleep from which he awakes a few hours later, tired, but otherwise little the worse.

Upon examination of the chest during an attack it was impossible to distinguish the heart sounds on account of the noisy breathing. The front of the chest was hyper-resonant, and respiration was loud and wheezing, the stridor being expiratory only, but over the bases of the lungs, when these could be examined, the note was poor and the breath sounds

diminished. There was no distension of the veins of the neck.

CASE 1.—A man aged 67. He had been an active man, having spent 35 years of his life in the Indian Civil Service, during which time his health had been good. About the year 1903, I believe, he had first learned that his heart was weak; but he suffered little from it until 1905, when he experienced an attack of acute dyspnœa accompanied by accumulation of fluid in the right pleural cavity.

The patient was first seen by the writer in March, 1906, on account of abdominal pain with the passage of large quantities of mucus by the bowel—a condition which persisted on and off during the remainder of his life. At that time the heart was considerably dilated and there were bouts of Cheyne-Stokes breathing at night; but he made good progress and six months later the condition of his heart was noted as follows: Apex beat in the nipple line, and no appreciable extension of dulness to the right of the sternum. There was a soft blowing systolic murmur at the apex and, at varying intervals, the tumbling sound of extra-systole followed by a pause. The radial pulse was regular, with occasional intermission, and the arteries were hard. At this time the systolic blood pressure used to vary between 170 mm. and 200 mm. of mercury. The lungs were somewhat emphysematous and there were signs of thickened pleura at the right base. He was constantly the subject of flatulent dyspepsia, and there were occasional showers of uric acid crystals in the urine, which also contained a trace of albumin and numerous casts.

The patient continued in fair health until the spring of 1907. At 7.45 P.M. on April 9th of that year he was seized with a very severe attack of dyspnœa which was ushered in with a sharp stabbing pain in the left shoulder and progressed in the manner already described. During the early part of the attack the pulse was frequent (148) but strong, of high tension and regular. At the height of the attack it began to fail and finally became soft and irregular, the successive waves being of strikingly unequal value. This condition of pulse persisted until after normal breathing had become re-established. At 8.45 on the following evening, April 10th, the patient had another attack, in all respects similar, but that it was less severe. At the commencement of both attacks he had inhalations of amyl nitrite and, later, injections of atropine and cardiac stimulants, whilst heat was applied to the trunk and extremities; but none of these measures seemed to be of the slightest avail. Inhalation of oxygen was maintained throughout and was probably beneficial, but it had no apparent influence over the progress of the attack.

Examination of the chest the next morning showed the apex beat to be half an inch external to the nipple line. There was still a very soft systolic murmur at the apex and the aortic second sound at the base was markedly accentuated. There were a few râles at the right base.

From this date until the following spring the patient did well, his one constant complaint being of flatulence coming on during the late afternoon and persisting until the early hours of the morning. In March, 1908, he had a sudden attack of tachycardia. Without warning the pulse suddenly one evening ran up to 200, at which rate it remained for about 12 hours. He was somewhat breathless and he was conscious of rapid heart beat, but otherwise comfortable and able to sleep. It subsided the next morning without treatment.

For another 12 months the patient continued in his usual health. It was then noted that the apical murmur was increasing in intensity, and that it had acquired an almost musical quality. During the latter part of May, 1909, he complained a good deal of pain across the upper part of the chest which he persisted in attributing to indigestion. At 8 o'clock on the evening of the 26th he had another attack of acute dyspnœa, commencing with bloody expectoration. At about 10.15 the acute phase had passed, and the patient seemed better, when, without warning, pulse and respirations rapidly failed, and a few minutes later he was dead.

CASE 2.—A man aged 75. He had been an exceptionally active, healthy man, and up to the time of his last illness he had played a leading part in the affairs of his county. During 1910, however, he had found himself unable to walk uphill without experiencing a little præcordial discomfort and a hitherto unaccustomed shortness of breath. In the July he had had some angina-like pain, and his medical man had warned him of its serious nature. Still, however, he followed his usual life until the autumn. On Nov. 29th he was seized with breathlessness and faintness with pain in the left arm and shoulder whilst walking home from a meeting in a crowded room. At that time respirations were rather hurried and there was marked irregularity of the pulse, symptoms which passed off in the course of an hour or so.

The chest was examined a few hours later. The apex beat was in the fifth space half an inch internal to the nipple line, and there was no apparent increase in the area of cardiac dulness. At the apex the first sound was poor and a faint systolic murmur was detected. The second sounds at the base were clear, but weak. The heart's action was not irregular but there was an occasional dropped beat. No extra-systole could be detected by auscultation. The pulse was 184, small and of low tension. The lungs were slightly emphysematous.

During the following fortnight the patient complained of frequent pains in the left arm. This he described as a rheumatic aching down the outer side of the limb, and it was usually most intense about the insertion of the deltoid. Occasionally it ran into the back of the hand, never into the fingers. No tenderness could be elicited in the parts affected by the pain. The tongue was lightly furred and there was frequently a little fresh mucus in the stools. Urine 1020, acid, no albumin, no casts, but there were frequent showers of uric acid crystals. Vaso-dilators had no influence over the pain, which increased in severity. Hot applications to the præcordium also were useless, and finally injections of morphia (¼ gr.) were tried but with no great benefit.

On Dec. 15th and 16th there was a sense of oppression across the chest, which was accentuated on the morning of the 17th, and at about 10 o'clock, just after his breakfast, he had an attack of acute dyspnœa. This attack differed from those which he subsequently suffered, and from those in Case 1, in that there was no cough until after the attack was over, and the dyspnœa persisted for a much longer period, about 26 hours. He was treated with injection of stimulants, vaso-dilators, and hot applications without benefit, but he thought that inhalation of oxygen seemed to afford some relief. Finally, a small dose of chloral was administered by the mouth, after which the breathing ceased and he went off into a quiet sleep for a couple of hours. On awakening he vomited, after which he expressed himself as feeling quite well.

For 12 hours after the attack the breathing was of the Cheyne-Stokes type, a condition of which he appeared to be unconscious, though it aroused much anxiety in the mind of his wife. The respirations were of this character after each attack suffered by the patient.

The next day the urine contained a heavy cloud of albumin, but no blood or casts. There was no œdema of the limbs. The albumin gradually decreased and had disappeared six days later, and the patient seemed to make fair progress. On Dec. 26th, however, he complained of a little aching "across the shoulders" and indicated the supraspinous fossæ; and at about 10 o'clock the next morning he was seized with a very severe attack, during the first hour and a half of which he was unable to obtain medical assistance. This attack lasted about three hours, after which he dropped off to sleep for an hour or two. Again, on waking, he vomited and immediately felt much relieved. During the next 12 hours he expectorated an ounce or so of blood-stained mucus, which was frothy, and remained so after standing for several hours.

During the latter half of this attack the pulse was 96, very soft, and irregular, and the waves were of markedly unequal value. The chest was examined the next morning. The apex beat was then a quarter of an inch external to the nipple line; the cardiac dulness extended a finger's breadth to the right of the sternum and upwards to the third rib. The apical murmur was louder than before. The irregularity of the pulse did not completely disappear until the fourth or fifth day after the attack.

A week later the apex beat had come back to half an inch internal to the nipple line, and the tongue had at last become clean. Mucus continued to show in small quantity in the stools, and the urine continued to deposit uric acid crystals; but there was no albumin. The pulse was usually soft, but varied considerably. Upon the only occasion that it was measured the systolic blood pressure registered only 95 mm. of mercury.

Again he seemed to make progress, remaining free from symptoms until the morning of Jan. 6th, 1911. There was then slight return of pain in the left arm on waking, which lasted for only a few seconds. On the two following mornings he had slight discomfort "across the shoulders" and in the left arm; but on the 9th he awoke feeling particularly well after an excellent night. He then again experienced sudden pain across the chest and return of the cough. Within a few seconds there was copious expectoration of bloody mucus, and he entered upon another attack. Acting upon previous instructions, the nurse immediately administered an injection of morphia (¼ gr.) with atropine (1/250 gr.), and in about three-quarters of an hour a further ¼ gr. was given. This appeared to decidedly mitigate the attack in all respects, for it terminated in less than an hour, and the patient experienced so much relief from the injections that he implored me, at all risks, to never fail in treating any subsequent attacks in like manner. During this attack the pulse was again weak and irregular from the commencement, and the waves were markedly of unequal value.

Dr. James Mackenzie saw the patient on Jan. 13th and took a polygraphic tracing. One intermission was caught and this showed the presence of extra-systoles followed by the pulsus alternans, a feature which Dr. Mackenzie regarded as of the gravest significance. At 3 A.M. on Jan. 23th the patient had another severe attack which was controlled in great measure by morphia. In this attack the patient was bled to the extent of half a pint and this seemed to afford some little additional relief. It was now determined to try the effects of a farinaceous diet, but with very bad results, for he had attacks, though of greatly diminished severity, on the 25th, 26th, 27th, and 28th. These slighter attacks were quite indistinguishable from ordinary cardiac asthma.

On the 29th he had a severe attack, the first one in which morphia proved ineffectual. At the commencement he was given ¼ gr. followed by ¼ gr. in half an hour, and again by 1/10 gr. half an hour later. After two hours, there being no signs of abatement, he was given a few whiffs of chloroform, and in less than a minute the breathing began to ease. The diet was then discontinued and he remained fairly comfortable until Feb. 6th. At 4 A.M. the nurse took the pulse and reported it to be 84 and regular, with no intermissions. Ten minutes later he was suddenly seized with an attack which progressed for about three quarters of an hour, when it appeared to be passing. Then the pulse and respirations grew weaker and rapidly faded away. He died about 50 minutes after the commencement. In this attack the palpable radial pulse never rose above 76 and there was no expectoration or gush of fluid from the mouth.

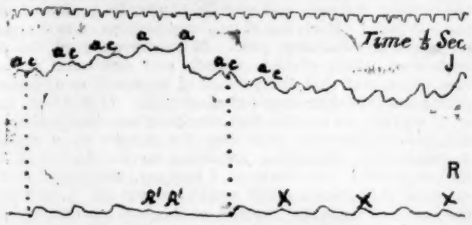
It is difficult to determine the exact nature of these attacks, but it is clear that they are closely akin to asthma. Accompanying the dyspnœa there was an acute œdema involving the bases of the lungs, as is evidenced by the cough which heralded the attacks, the expectoration of frothy, and usually bloody, mucus, and the physical signs. The quantity of the expectoration varied considerably. Upon one or two occasions it amounted to about a couple of ounces, whilst at other times it was very scanty; and it seems open to question whether the dyspnœa was determined solely by the œdema or whether the two conditions were caused by some common influence.

The patients did not die suffocated. The fatal event occurred after the height of the attack had passed. There was then no marked cyanosis and no welling up of fluid into the mouth, and the heart did not continue to beat after respiration had ceased.

After each severe attack it was constantly found that the apex beat had moved outward to the extent of ½ in. or ¾ in., pointing to some dilatation of one or both ventricles. But the full, strong, and regular pulse during the first part of the attacks in Case 1 suggests that, whatever the trouble, it did not originate in the left ventricle; and the complete absence of regurgitation into the veins of the neck, the rapidity with which the patients recovered, passing from a state of anguish into one of comparative comfort in a few hours, together

with the absence of serious after signs and symptoms, and the better results obtained by treatment with morphia than with stimulants, indicate that this dilatation was a result, and not a cause, of the attacks.

There is evidence, however, that some other of the functions inherent in heart muscle were in a state of depression both during the attacks and during the intervals between them, in support of which Dr. Mackenzie has very kindly permitted me to reproduce the tracing which he took in Case 2 together with his explanation of it. In this tracing the minute waves of two extra systoles are seen during one of the periods of apparent intermission of the radial pulse, and immediately following it is a transient phase of pulse in which the waves are regular in time but unequal in value. Notwithstanding the imperfection of the tracing its meaning is clear, and in Dr. Mackenzie's opinion it constitutes a characteristic example of the pulsus alternans.



Simultaneous tracings of the jugular and radial pulses. The beats R' R in the radial tracing are extra-systoles due to premature contractions of the ventricle. The waves *a*, in the jugular, due to the auricular systole, are quite regular during the irregular period in the radial. The waves *c* are due to the carotid. The radial pulse after the irregular period is regular in rhythm, but every second beat (x x x) is slightly smaller—the pulsus alternans. (Tracing and interpretation by Dr. Mackenzie.)

Resulting as it does from serious depression of the function of contractility,[5] recognition of this type of pulse is of great importance, and Dr. Mackenzie informs me that he regards it as of the gravest significance whenever it occurs in association with serious cardiac trouble.

It is probable that the palpable inequality of pulse waves which thrust itself upon the notice of the observer during the attacks in both patients was also due to this cause; and to the same source, perhaps, should be ascribed the persistent and intimately associated symptom of angina[6] from which these patients suffered.

In some cases it has been observed that development of the pulsus alternans has been occasioned by an attack of tachycardia,[7] but in the absence of a tracing it is unknown whether this association obtained after the bout of tachycardia which occurred in Case 1.

The occurrence of more or less persistent symptoms pointing to digestive disorder in these cases, and of the series of slight attacks which were consequent upon an unsuitable diet in Case 2, raise the question whether reflex vagus stimulation were not a factor in determining the onset of the attacks, and this element of nervous influence would account for the beneficial effects of treatment with morphia and chloroform, an experience which coincides with that of other observers[8] in similar cases. Both patients were lifelong abstainers from tobacco.

Bibliography.—1. Stengel, American Journal of the Medical Sciences, January, 1911. 2. THE LANCET, vol. i., 1902, p. 73. 3. THE LANCET, vol. i., 1902, p. 366. 4. THE LANCET, vol. ii., 1907, p. 1606. 5. Mackenzie, Diseases of the Heart; Hay, Liverpool Medico-Chirurgical Journal, July, 1910. 6. Mackenzie, loc. cit.; Colbeck, Practitioner, March, 1910. 7. Mackenzie, loc. cit.; Hay, Heart Disease, Graphic Methods. 8. Stengel, Lissaman, loc. cit.

Torquay.

UNIVERSITY OF CAMBRIDGE.—The next examinations for medical and surgical degrees are announced to begin as follows: First Examination, Parts I. and II., June 12th; Part III., June 14th; Second Examination, June 12th. The names of candidates for these examinations should be sent to the registrary before June 2nd. Third Examination, Part I., begins on June 12th; Part II. on June 13th. The names of candidates for Part I. should be sent to the registrary by June 2nd, of those for Part II. by June 3rd. The examination for the M.C. degree begins on June 15th.

NOTES ON A CASE OF GASTRO-ENTEROSTOMY AFTER 15 YEARS.

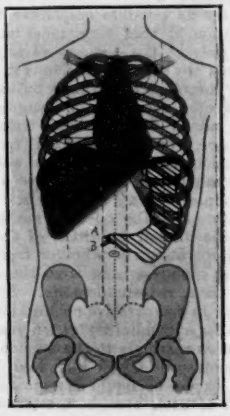
BY RICHARD BEVAN, L.R.C.P. LOND., M.R.C.S. ENG., D.P.H.

IN September, 1896, and again in May, 1899, I reported in the pages of THE LANCET the details of two cases of pyloric obstruction, and described the benefits conferred on these patients by the above operation. I have continued to have one of these cases under my observation ever since, and on reading the address of Mr. A. E. Maylard on the Symptomatic Vagaries of Partial Pyloric Obstruction, published in your issue of May 6th, it has struck me that the vagaries of his pylorus and the chequered career of this patient may be of some clinical interest, if of no value pathologically. When operated on in December, 1895, the obstruction of the pylorus would appear from the symptoms to have been almost complete, for, in the words of my previous paper, "there was loss of flesh (he was only 7 st. 8 lb.); he was anæmic, of an earthy colour; he was plagued with horrible eructations; he loathed food; appetite he had none, and eating was pain and sorrow to him; he could not sleep; he vomited often gallons of brownish, fermenting, evil-smelling material; his lassitude and exhaustion were distressing, and he was poisoned with toxins and ptomaines, so that he was subject to dangerous attacks of syncope; he was cold, nothing warmed him; and his thirst was that of 'Dives,' and, like him, it could not, dare not, be satisfied or gratified." These were, no doubt, the symptoms of an extreme case: one, in fact, which, owing to the increased facilities offered nowadays for early operation, is rarely met with, yet it is a real and living picture of an actual case—one which only continued to exist, until operation relieved him, by the help of lavage twice and sometimes three times a day. I have, however, dwelt on the picture to as far as possible emphasise the fact that the pyloric obstruction at that time must have been such as to almost totally prevent the passage of any food through it. The relief given by the operation (an anterior gastro-enterostomy by means of a Murphy's button) was immediate so far as it affected some of the symptoms; he lost the vomiting, he gained flesh, colour, weight, energy, and courage at once, but he enjoyed freedom from discomfort, distension, fermentation, and some other troubles by the continuance of lavage once or twice a day for at least a couple of years afterwards. Whether this was due to the smallness of the opening made by the Murphy's button, or by the dilated condition of the stomach caused by the delay in operating, or whether from the destruction of the digesting glands arising from the same cause, or a combination of them, it is hard to say. Anyhow, my patient continued to live in comparative comfort (with the exception of an operation for appendicitis) for ten years, recourse being had more and more sparingly to the syphon tube as digestion improved and contractile power increased. Of course, indiscretions in diet, excess of liquid at a meal or between meals, or overwork, all or each brought matters to a crisis which was only relieved for the time being by either vomiting or lavage. These occurred occasionally, perhaps more frequently than in the lives of healthy individuals, yet with the exception that very often there was a small bile-stained residuum in the stomach in the morning, life was comfortable and endurable.

Five years ago my patient began to suffer from occasional attacks of pain, coming on about three hours after breakfast, in the right hypochondrium, just below the ninth costal cartilage. The pain could be localised to one particular spot and radiated horizontally and upwards as far as the right nipple. At times it was severe, boring, piercing, lancinating, and lasted until it was relieved by a good big dose of alkali, of which magnesia carbonate was the best, or by the ingestion of a fresh meal. It, however, usually returned again in the afternoon and again in the evening, but curiously enough it gradually ceased or eased off when lying in bed, unless attacked with an unusually severe spasm, when possibly the pain made itself felt throughout the night until morning, but this was rare. In the first year or two there were stretches of months in which the pain was almost, if not quite, absent, but during the last two years it has been persistent—that is, that with very, very few intervals of freedom

it recurred with regularity day after day up to a date in February of the present year, which will be referred to later on. Indiscretions in diet, such as drinking acid wines, food hastily masticated, eating many kinds of vegetables and fruits, aggravated the pain. A heavy day's work and long hours, by using up the necessary energy required for digestion, did very much the same to be relieved principally by rest in bed. During the night the stomach usually emptied itself of its contents, but this process was usually accompanied by violent peristalsis with much gurgling, and sometimes accompanied by cramp-like pain of such violent character as to awake the patient. Within the last year the pain centre has shifted its position to about the level of the ninth rib in the *mid-axillary* line, radiating round the back, up on to the shoulder, into the axilla, and down the arm, and round in front down into the groin. Sometimes the paroxysms were very severe, at other times the pain was bearable, but scarcely a day passed without its presence being felt.

In January of this year a spell of hard work brought on a very severe attack of indigestion, and although rest and change altered matters for the better, yet it was deemed prudent to consult Mr. Charters Symonds as to the advisability of taking advantage of the X rays to investigate the condition of the operation stoma and also to measure the amount of patency of the pyloric passage, and to let any further surgical measures depend on his report. Dr. A. C. Jordan reported as follows—viz., "The stomach, as seen vertically, appears somewhat enlarged and dropped. Peristalsis is seen, though it is not very active. Voluntary contractions of the abdominal muscles greatly raise the great curvature. On the couch the stomach is seen to be bulky. Fairly active contractions take place, but do not reach the pylorus. There is no antrum pylori, the pyloric termination having a conical form. No bismuth is seen to pass out by the old gastro-jejunostomy opening in either position (vertically or on the couch), and none is seen to pass out by the pylorus. After



A Conical cicatrised pylorus; B, the only point of the pylorus at which a little bismuth was able to escape.

2½ hours fully two-thirds of the bismuth are in the stomach. The rest is scattered through the small intestine. A little is seen leaving the stomach at the pyloric end, just below the conical termination. None leaves by the stoma. After 8½ hours the stomach still contains quite half the bismuth meal. The rest is scattered in the ileum. None has reached the cæcum. There is thus obvious change of shape and constriction at the pyloric orifice, and the gastro-jejunostomy opening has clearly ceased to function."

Commenting on this report, it is pretty obvious that for at least the last five years the operation opening has more or less ceased to act, compelling food once more to find its way through the pyloric opening as best it could. Judging by the symptoms, although there has been more or less pain accompanying the passage of food through the pylorus into the duodenum, yet compared with the urgent symptoms in the pre-operated period of 15 years before digestion and nutrition was carried on with comparative ease and efficiency. This must by inference be due to some alteration in the capacity or patency of the pyloric orifice. No doubt during the time that the operation orifice was patent, the lack of irritation allowed of the subsidence of a good deal of the inflammatory swelling, and possibly spasm around and about the sphincter. Possibly some alteration may have taken place in the character and situation of the original contraction scar. Again, in the vertical position the shadow of the greater curvature of the stomach showed far below the umbilicus, and although peristalsis was seen it was ineffectual in reaching the pylorus. Is it to be doubted that the expulsion of the stomach contents during the day while the body was in the vertical position was greatly interfered with and hindered by this sagging of the bulky stomach and by the difficulty it would have to overcome in getting over the angle which would be formed at the junction of the pylorus with the duodenum; a difficulty partly overcome in the lying position at night? Then, again, what was the cause of the pain, and why did it alter its position during the last year? Much has of late been written as to the cause of gastric and duodenal pain. It has been argued that the surface of ulcers of the stomach and duodenum is itself insensitive, and that the passage of hyperacid or undigested substances over them does not cause pain. If this is so, how is it possible to explain the absolutely constant position of the pain centre day after day for months at a stretch, decreasing or increasing according to the nature of the food ingested? No adhesions, I may say, were found at the subsequent operation which would account for it, and none has been felt since the direction of the food current has been diverted. Probably many more interesting questions will occur to your readers, but for the present the old symptoms have been abolished, and new life has been given to my patient by a fresh gastro-jejunostomy being performed in February last, and it is to be hoped that he will be relieved, at any rate for a time, of the necessity of depending, in the words of Mr. Maylard, on the vagaries of a partially obstructed pylorus.

West Kensington, W.

A CASE OF PNEUMOTHORAX COMPLICATING BRONCHO-PNEUMONIA IN A CHILD AGED TWO YEARS.

BY ALICE E. SANDERSON, M.B., B.S. LOND.,
LATE HOUSE PHYSICIAN TO THE ROYAL FREE HOSPITAL, LONDON.

A MALE child, aged 2 years, was admitted into the Royal Free Hospital on May 6th, 1910, under the care of Dr. J. W. Carr, to whom I am indebted for permission to publish this case. The child had been ill for four days with cough and vomiting. He was well nourished but was pale and drowsy, and he resented interference. The alæ nasi were working and the respirations grunting. The fontanelle was open and bulging, but there were no other signs of rickets. Temperature, 101·2° F.; pulse, 156; respirations, 48. On percussion the note was impaired over the whole of the right lower lobe behind and there was a patch of dulness just below the angle of the scapula. The breath sounds were diminished, and crackling crepitations were heard over the dull area. At the right base expiration was prolonged and loud and harsh in character. The physical signs in the left lung were normal; there was no enlargement of liver or spleen. On the 11th the dulness at the right base was less marked and the pneumonia seemed to be resolving. There was a patch of bronchial breathing, however, at the right apex behind, and by the 14th there were definite signs of consolidation of the right upper lobe. On the 17th there was a good deal of mucoid sputum coughed up, which was shown to contain pneumococci. The child's general health became rapidly worse; the pulse was small and quick and the rate of respiration varied between 48 and 60. The patient often became cyanosed and was relieved by oxygen. There was an intermittent temperature varying from 99° to 104°. The lower edge of the liver was felt half way between the costal margin and the umbilicus. The spleen was not felt. The child was becoming very emaciated, but took his food well. On the 24th signs were first noticed in the right axilla suggestive of pneumothorax or a vomica. The liver was pushed down and reached nearly to the umbilicus. On the 26th the signs of

pneumothorax at the right base were quite distinct. There was bulging on this side and well-marked shifting dulness, with a tympanic note over the area which was placed uppermost. There was cavernous breathing over this region, and the "bell sound" was obtained. The breath sounds over the remainder of the right side were weak or absent. The left lung was resonant all over; the breath sounds were good; a few crepitations were heard at the base. The heart was displaced slightly to the left. The upper limit of the liver dulness was at the costal margin, and the lower edge was felt well below the umbilicus. The patient died on the 27th after three weeks' illness. At the post-mortem examination a pneumothorax was found on the right side. The right lung was small, collapsed, and airless, and was lying close against the spine. The pleura was covered with a thick layer of lymph, and the site of the perforation was not found. Histological examination showed areas of pneumonia which had begun to break down. The right pleural cavity contained about six ounces of greenish-yellow pus. Films from the pus showed the presence of numerous pneumococci, and pure cultures of the same organism were obtained. The left lung was emphysematous and contained one or two consolidated patches and some areas of collapse. The mediastinal glands were swollen. The liver was displaced downwards; it was much enlarged and fatty. A small bead of pus was found in each middle-ear, and from it cultures of the pneumococcus were grown. There was no meningitis. No evidence of tuberculosis was present.

During the earlier course of the disease, which was not that of a typical pneumonia, it was thought that the condition was due, in part at least, to tuberculosis, and when the presence of a pneumothorax became evident this diagnosis seemed even more probable; for a pneumothorax is not often met with apart from tuberculous infection or traumatism in adults, and the condition is very rare in children. The post-mortem examination, however, showed that the case was one of broncho-pneumonia due to the pneumococcus. The softening which the areas of consolidation had undergone probably resulted in rupture of some of the pulmonary alveoli, hence the formation of the pneumothorax and infection of the pleural cavity.

On looking up the literature of the subject I find recorded only 12 cases of pneumothorax in children under 16 years. These were published by Burghard,[1] Carrière,[2] Hale White,[3] Kidd,[4] Leconte and Mézerette,[5] Lees,[6] Lucas,[7] Pollock,[8] Rogers,[9] Sevestre,[10] and Variot and Roy.[11] Of these, one was due to "a micrococcus," four to tuberculosis, four to traumatism (paracentesis thoracis, tracheotomy, chest injuries), and one to typhoid fever.

Clapham, S.W.

[1] THE LANCET, 1903, vol. ii., p. 1576.
[2] Nord Méd., Lille, 1905, vol. xi., pp. 73-77.
[3] Brit. Med. Jour., 1896, vol. i., p. 466.
[4] Transactions of the Clinical Society of London, 1902-03, vol. xxxvi., p. 251.
[5] Bulletin de la Société de Pédiatrie de Paris, 1907, vol. ix. pp., 69-76.
[6] Dublin Journal of Medical Science, 1843, vol. xxiii., p. 167.
[7] Brit. Med. Jour., 1895, vol. i., p. 811.
[8] Transactions of the Pathological Society of London, 1862-3, vol. xiv., pp. 17-19.
[9] Brit. Med. Jour., 1894, vol. ii., p. 1269.
[10] Bulletin et Mémoire de la Société Médicale des Hôpitaux de Paris, 1886, 3, vol. iii., pp. 351-60.
[11] Ibid., 1901, 3, vol. xviii., pp. 1040-46.

LIVINGSTONE COLLEGE.—In view of the many celebrations which are taking place in London in connexion with the Coronation, it has been decided not to hold any formal Commemoration Day proceedings at Livingstone College this year.

SALFORD ROYAL HOSPITAL.—At the last meeting of the board of management of this hospital a letter of resignation owing to continued ill-health was read from Dr. E. T. Milner, one of the honorary surgeons. The board received the announcement with much regret, and conveyed to Dr. Milner their high appreciation of the valuable services which he had rendered to the institution during the period of his appointment. He was elected honorary assistant surgeon to the hospital in October, 1891, and was promoted to full surgeon in January, 1898. It was resolved that Dr. Milner be appointed an honorary consulting surgeon to the hospital.—The late Mr. V. K. Armitage has bequeathed to the Salford Royal Hospital for general purposes a legacy of £1000, free of duty.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

NOTE ON A CASE OF PRIMARY STREPTOTHRIX INFECTION OF THE PLEURA.

BY A. BERNSTEIN, M.B. LOND.,
SENIOR HOUSE PHYSICIAN TO THE BROMPTON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST; LATE HOUSE PHYSICIAN AT WESTMINSTER HOSPITAL.

THE rarity of this condition justifies the publication of the clinical notes in every case to add to the literature.

The patient, a female, single, aged 24, was admitted to Westminster Hospital on March 8th, 1910, under the care of Dr. F. de Havilland Hall, to whom I am much indebted for permission to record the case. Family history: Mother and several children died from consumption and father has chest trouble. Previous history: The usual illnesses of childhood, and then no other illness till 1908, when she had an ovarian cyst removed. In December, 1908, she was in Westminster Hospital for 10 days with pleurisy. Again on August 3rd, 1909, she was admitted with dry pleurisy. She had rigors, cough, pain in the left side with deficient movement and impaired resonance and pleuritic rub. The temperature for some days was 103° F., pulse 104, and respirations 28. In about 10 days the temperature returned to normal. There was some vomiting for a day or two after admission; no night sweats; no tubercle bacilli in sputum. She was discharged cured on August 20th. Since then she had had bad cough with expectoration, especially in the morning. Present illness: Complained of pain in left side. She had not been well for some time. On March 2nd, 1910, pain in left shoulder, then spreading round side. She had tried to work since but had to give it up. She said she had lost flesh.

On admission on March 8th, 1910, the patient looked very ill; some cyanosis and dyspnœa; face and eyelids markedly œdematous; temperature 103°, respiration 30, and pulse 108. There was marked pulsation in veins of neck; tongue coated; no herpes. The fingers showed very marked clubbing. The chest was well covered; apex beat in fifth space, half an inch internal to nipple line; no dulness to right of sternum nor above third rib. Movement was restrained on left side; also slightly impaired resonance over left lung, increasing from above downwards; vocal fremitus decreased; prolonged expiration over upper lobe; pleuritic rub and râles over lower lobe and breathing vesicular. The urine contained a trace of albumin. March 8th and 9th: Vomited ten times. March 10th: Impairment of left lung more marked, especially below. Breath sounds at base distant, while at angle of scapula bronchial breathing and pectoriloquy; vesicular breathing over upper lobe; no friction. Vomiting had ceased. The patient was somewhat better. March 12th: Basal dulness extending upwards and becoming more marked at extreme base with feeble breath sounds; towards angle of scapula more resonant, with bronchial breathing, pectorilcquy, and ægophony. March 14th: Much bronchitis and expectoration. March 15th: Explored—*nil*. March 16th: Explored again—pus. Portion of a rib was immediately resected. Much thick, foul-smelling pus was evacuated and also a number of fibrous masses as big as hazel-nuts. On exploring with the finger many adhesions were felt, with much thickening of pleura. Drainage-tubes were left in. March 18th: Still much pus and a fair amount of pinkish (blood-stained), frothy expectoration. March 24th: Temperature normal; convalescent. April 18th: Patient now very well; only the slightest discharge from wound. No cough; had put on flesh; left chest resonant and fairly good air entry. In another fortnight the wound absolutely healed. The temperature for the first week remained between 102° and 103·4°, pulse 110, and respiration 28. After the operation the temperature gradually returned to normal in eight days and remained so till the patient was discharged from hospital.

Report from the pathologist, Dr. R. G. Hebb:—1. Sputum contains no tubercle bacilli, but pneumococci and numerous organisms present. 2. Material from pleural sac consists of

dense felt work of filaments of streptothrix. 3. Pus from chest. Long filamentous-like chains. Most of the elements resemble small cocci, but on the course of the chains are spheroidal and club-shaped elements. The organism stains well by Gram's method, and very badly, if at all, by Loeffler's. Cultures were all sterile till the seventeenth day, when a streptothrix in pure culture grew. The culture, unfortunately, soon died out.

When seen in June, 1910, the patient looked and felt perfectly well. The clubbing of the fingers had quite cleared up. The wound in the side was quite healed. There was only the very slightest deficiency of movement and air entry on the affected side, and resonance and breath sounds were practically normal.

NOTE ON A RARE FORM OF STRANGULATED INTERNAL HERNIA; OPERATION; RECOVERY.

BY HENRY J. CLARKE, JUN., M.A., M.B., B.C. CANTAB., M.R.C.S. ENG., L.R.C.P. LOND.,
HONORARY SURGEON TO THE DONCASTER ROYAL INFIRMARY.

THE patient, a man, aged 37 years, was admitted to the Doncaster Royal Infirmary on Sept. 11th, 1910, at 8.45 P.M. At 8.30 that morning he had had his breakfast, consisting of eggs, bread, &c., and felt perfectly well. At 11.45 A.M. he felt a griping pain in his abdomen and went down the yard to stool; the pain became worse, but he passed a fair motion. On returning to the house the pain became more intense and doubled him up, and he had to go to bed. During the afternoon he vomited six or seven times and continued in great pain.

On admission the man was in great pain and lay on the couch with his knees doubled up. The abdominal walls did not move on respiration, and were absolutely rigid and board-like; there was considerable tenderness in the epigastric area. His temperature was subnormal and pulse 100. It was recognised that some abdominal catastrophe had occurred, possibly perforation of a duodenal or gastric ulcer, and immediate operation was advised.

Operation was performed the same evening at 10 o'clock. The patient was anæsthetised with chloroform. The operation area was first shaved and then painted with tincture of iodine. An incision was made in the middle line, extending from the ensiform cartilage to just below the umbilicus. After opening the peritoneum a deeply congested loop of small intestine was seen situated between the stomach and the liver. At the first glance it looked like an accessory lobe of the liver. On tracing the limbs of this loop backwards towards the spine for several inches they were found to enter a small aperture, the edges of which were tightly constricting the two limbs of the loop. The aperture itself could not be seen, as it was situated too deeply in the abdomen. After considerable difficulty I managed with my left hand to gradually squeeze the limbs through the aperture back again into the greater sac of the peritoneum amongst its fellow coils of small intestine. I was then able with my right hand to bring the affected loop to the surface for examination. Both of the limbs forming the loop presented a constriction, due to the pressure exerted by the edges of the aperture. The portion of intestine between the two points of constriction was very congested, but this soon recovered after being washed with warm saline solution. The abdomen was then closed and the patient returned to bed. Ten ounces of saline solution were injected per rectum every three hours. Next morning the patient was very comfortable; his temperature was 100° F. and his pulse 92. On Sept. 13th he was given a turpentine enema with a fair result. He was discharged quite recovered on Oct. 7th, and is now doing his ordinary work.

In the opinion of both Dr. A. Christy Wilson, who most kindly assisted me at the operation, and myself this was a case of hernia into the foramen of Winslow which had become strangulated. This, of course, is incapable of absolute proof, as there was no post-mortem examination, the man recovering. The case presents several points of interest in that the condition is very rare and that the patient recovered. If he had been left several hours longer without operation it would have been quite impossible to reduce the hernia, for by that time the loop of intestine would have become distended; as it was it only went back after considerable difficulty. Moynihan[1] states that hernia into the foramen of Winslow has been recognised in eight cases. Finally, this case emphasises the need for early diagnosis and prompt action in cases of sudden abdominal emergency.

Doncaster.

NOTE ON A CASE OF MIXED-CELLED SARCOMA OF THE CLAVICLE IN A CHILD.

BY HAROLD W. WILSON, M.S. LOND., F.R.C.S. ENG.,
ASSISTANT SURGEON TO THE CANCER HOSPITAL; SURGEON TO OUT-PATIENTS TO THE VICTORIA HOSPITAL FOR CHILDREN, CHELSEA; SENIOR DEMONSTRATOR OF ANATOMY, ST. BARTHOLOMEW'S HOSPITAL.

As the clavicle is so rarely the seat of malignant disease the following case of primary sarcoma of that bone seems worthy of a note to record its occurrence. Bland-Sutton,[2] writing in 1906, and referring to the clavicle, says: "Periosteal sarcomata of this bone are rare, and in nearly all recorded cases have originated near the middle of the bone. ..... Examples reported to be central sarcomata arose mainly in the sternal end, but these were in all probability myelomata."

The patient, a little girl of 11 years, came under my care at the Victoria Hospital for Children in October, 1910. Her mother stated that she had noticed a "painless lump on the inner end of the right collar-bone" for about one week. The swelling did not appear to have inconvenienced the child in any way, except that she had complained of slight tenderness whilst being washed the day before she was brought to the hospital. On examination the sternal end of the right clavicle was found to be represented by a globular swelling measuring about 1½ in. in diameter. The tumour, which had a smooth surface and a fairly abrupt steep edge externally, appeared to involve the whole circumference of the bone, and was thought to be a myeloma. It felt bony hard, except for one small place on its anterior aspect, where it appeared to be somewhat softer, and gave way a little on firm pressure before the examining finger. The overlying superficial tissues were not involved, and there was no enlargement of the cervical or axillary glands of the corresponding side. A not very successful X ray plate showed enlargement and great rarefaction of the sternal end of the bone, but did not afford much help in the diagnosis. It showed no limiting shell of compact bone such as one would have expected to find over an expanding growth, nor could the line of an altered shaft be traced into the swelling.

The swelling was cut down upon, and as it was undoubtedly a new growth of some kind the incision was extended, and rather more than the inner half of the clavicle resected and removed with its periosteum, the bone being divided immediately internal to the attachment of the conoid ligament. Portions of the great pectoral and sterno-mastoid muscles at their clavicular attachments were also taken away as a precautionary measure, although they did not show any evidence of involvement. On opening the sterno-clavicular joint it was noted that the articular cartilage of the sternal end of the bone appeared natural. By the ninth day the stitches were out and the wound healed, and one was rather surprised to find that even at this early date the child appeared to suffer no inconvenience from the operation, and that the movements of the right shoulder-joint were as free and painless as those of the opposite side.

After a careful examination of the specimen it was concluded that it was an ossifying sarcoma, which had originated on the anterior aspect of the bone. The growth was spreading outwards immediately beneath the periosteum and had invaded the cancellous tissue of the sternal end of the bone. In the latter situation it was much softer than elsewhere, and presented a purplish appearance with small pale areas scattered throughout its substance. These spots afterwards proved to be small islets of necrosis. It is just possible that this might have been an example of a sarcoma of central origin, referred to by Bland-Sutton as occurring in this situation; but from the fact that there was a very little, if any, expansion of the bone, and seeing that the growth showed a greater sub-periosteal extent than could be

[1] Moynihan's Abdominal Operations, p. 475.
[2] Tumours — Innocent and Malignant, J. Bland-Sutton, fourth edition.

seen in the medullary canal, I think this unlikely, and believe the former view to be the correct interpretation. Dr. F. W. Andrewes was kind enough to microscope several portions of the tumour for me, and reported that the growth was a typical mixed-celled sarcoma showing a considerable amount of necrosis.

At the present time (seven months after operation) the child appears perfectly well, and there is no dropping or falling forwards of the affected shoulder. Knowing, however, what the after-history of these cases almost invariably is, one fears that the appearance of secondary growths in the lungs or elsewhere can only be a matter of a few months at most.

Wimpole-street, W.

Medical Societies.

ROYAL SOCIETY OF MEDICINE.

CLINICAL SECTION.

Exhibition of Cases.

A MEETING of this section was held on May 12th, with Sir ALFRED PEARCE GOULD, the President, in the chair.

Dr. WILFRED HARRIS showed a case of Spondylitis, with Progressive Muscular Contracture. The patient was a man, aged 33, who was invalided from the army three years ago on account of constant pains in the back and shoulders. A year previously he had relapsing fever in West Africa. The pains were severe for two months, during which time he noticed that his back and neck were becoming stiff and stooping. This condition had become progressively worse ever since. He had taken 10 gr. of aspirin daily for the last two years, as he found the pains returned if he left off the drug for two days. He was very weak and unable to dress and undress alone. The spine showed general kyphosis and was quite rigid, the head being held forward, with only very slight lateral and antero-posterior movements possible. The chest was not flattened, but was absolutely rigid, breathing being entirely diaphragmatic. The shoulders were very rigid, owing to muscular spasm and contracture fixing the scapulæ, but the shoulder-joints were normal. Under chloroform anæsthesia the scapulæ could be moved fairly freely, but the arms could not be raised much above the horizontal, owing to contracture of the pectoral muscles. The hip-joints and lower extremities were perfectly normal, and there was no evidence of any rheumatic affection. Skiagrams showed no abnormality of the spine or thorax.

Dr. H. D. ROLLESTON and Mr. G. P. HUMPHRY showed a case of Rigidity of the Spine. The patient was a man, aged 26, whose father (6 ft. 6 in.), mother, brothers, and sisters were all healthy except one sister, who had chorea. He had not had any injury, enteric fever, gonorrhœa, or syphilis, and was healthy until January, 1905, when he had acute rheumatism and was in bed for six months. In December, 1906, he had a similar attack, and was in bed for four months, his heart being affected. In April, 1909, he had another attack, and on that occasion his back and neck began to get stiff. In June, 1909, he was admitted into St. George's Hospital, and had the appearance of ordinary subacute rheumatic fever, and reacted to salicylates. It was not until he began to convalesce that the stiffness of the spine was noticed. He then went to Bath for treatment and was somewhat improved. He noticed that the stiffness of the spine varied considerably from time to time. In March, 1910, he was treated with 'leucodescent' light without benefit. In May, 1910, while at the seaside, the rigidity passed off, but returned after he had been in London three weeks, and had remained since. Since he had had the spinal rigidity he had been subject to sudden shooting pains in the back which spread all over the body. There were marked kyphosis and rigidity of the spine; when placed on the floor the first part of his spine to touch the floor was the tenth dorsal spine; when in this position the external occipital protuberance was 2½ in. from the floor. This was maintained in deep general anæsthesia. There was slight lateral curvature in the dorsal region to the right, and a compensatory lumbar curve to the left. The head could be moved vertically for 1 inch; rotation of the head, measured by the movement of the chin, could be carried to an extent of 1¼ inches to the right of the middle line, and ¾ inch to the left of the middle line. Under an anæsthetic these movements were suddenly stopped as if by a bony obstacle. The right arm was smaller than the left, and movement at the shoulder-joint was restricted, the arm not reaching the right angle with the trunk; this appeared to be due to contraction of the pectoral muscles. The movements of the left arm were practically normal. The thighs could be flexed to the right angle on the hips. The big toes were remarkably long; this the patient stated to be hereditary. The chest was flattened and there was only ¼ inch expansion (30¼ to 30½ inches). Breathing was almost entirely diaphragmatic (expansion of abdomen 2 inches), and the abdominal muscles were constantly rigid. The apex beat was in the fifth space in the nipple line, and there was a mitral systolic murmur. There was no alteration in cutaneous sensation. The knee-jerks were present. Dr. G. Allpress Simmons, who had kindly provided the skiagrams, reported that the repeated radiographic examinations made during the past year did not suggest that there was any bony ankylosis of the vertebræ, but that the appearance of the anterior common spinous ligament in the upper cervical region was compatible with the view that there might be calcification in that ligament.—The two preceding cases were discussed by the PRESIDENT, Dr. F. PARKES WEBER, Dr. F. J. POYNTON, Dr. W. ESSEX WYNTER, and Mr. F. S. KIDD.

Dr. J. FAWCETT showed a case of Cystic Disease of the Kidneys. The patient was a woman, aged 43, who was admitted for anæmia and the two tumours described later. The "periods" had been profuse for two years, and more so during the past six months. In October, 1910, there was some swelling of the ankles, and since that time she had been short of breath on exertion; she also complained of aching in the loins. The patient noticed the "lumps" in the abdomen three weeks before admission. She had been in the hospital for four weeks. The menorrhagia had ceased and great improvement had taken place in her general condition of health. The tumours were *in statu quo;* they were situated one in each side of the abdomen, reaching from the costal margin above well down into the iliac fossæ on either side and into the loins. They had a somewhat irregular or sinuous outline, and were of semi-elastic consistence. On the surface of the left tumour several rounded "knobby" projections could be felt.—Mr. TARGETT and Mr. BELLINGHAM SMITH were of opinion that the tumours had no connexion with the pelvic organs.

Mr. HERBERT TILLEY showed specimens illustrating removal of Foreign Bodies from the air-passages and the œsophagus. He demonstrated the following: 1. A portion of a rabbit bone which had been impacted in the right bronchus for more than three years, and had produced symptoms of bronchiectasis; the bone was removed by direct bronchoscopy. 2. A portion of mutton bone removed by direct bronchoscopy from the right bronchus, wherein it had been impacted for ten days. 3. A metal cap of lead pencil removed from the left bronchus by direct bronchoscopy. The skiagram was exhibited. 4. A portion of a hatpin removed by direct bronchoscopy from the left bronchus, wherein it had been impacted for six weeks. Skiagram shown. 5. A teat or "comforter" removed from the œsophagus of a child four days old by direct œsophagoscopy. 6. A penny removed from the œsophagus of a girl aged 13; it had been impacted for 13 days. 7. A farthing removed from the œsophagus of a boy aged 5; it had been impacted for five hours.—In the discussion that followed Mr. A. CARLESS, Dr. C. W. CHAPMAN, Mr. KIDD, and Mr. LAWRIE H. MCGAVIN took part.

Dr. ESSEX WYNTER showed a case of Graves's Disease in a boy, commencing at the age of ten. The patient, aged 11, exhibited undue prominence of the eyes at the age of ten, nearly a year ago. When admitted to Middlesex Hospital on March 16th, 1911, there was obvious proptosis, with all the usual signs. The thyroid gland was enlarged, both isthmus and lobes; the fingers, when extended, exhibited fine tremor; the skin was moist, and the hands and neck showed yellowish pigmentation. There had been no cramps, but the patient had fainting attacks, flushes, and occasionally showed some temporary puffiness of the face. There was incontinence of urine; the urine was clear, amber-coloured, acid, specific gravity 1015, and had contained a trace of albumin. The pulse had ranged from 92 to 124. Thyroidectin had been given in 5-gr. doses twice a day. On two

occasions pituitrin was substituted, but the pulse rose to 110 and 124 under its influence, falling to 96 when it was discontinued. The case was a mild one, but exceptional on account of the sex and age of the patient.

Dr. H. D. ROLLESTON showed a case of Recurrent Attacks of Post-typhoidal osteitis. The patient, a man, aged 30, had enteric fever, complicated with thrombosis in the left femoral vein. Since then he had had attacks every spring or winter of pain and swelling at the junction of the lower and middle thirds of the left tibia. There had never been any discharge of pus or perforation of the skin. Usually the attacks lasted three weeks, but this attack had been the most severe. Syphilis was denied and a Wasserman reaction was negative. Widal's reaction was negative. On admission there was a raised, red, painful œdematous swelling about the size of a hen's egg at the junction of the lower and middle thirds of the left tibia. There was a small soft area in the middle suggesting a "shirt-stud" abscess. At this point the girth of the left leg was half an inch more than that of the right. With rest and lead and opium applications the inflammation had subsided, but a node can be felt. A skiagram taken by Dr. Allpress Simmons showed much osteitis and periostitis and narrowing of the medullary cavity, but no evidence of shirt-stud abscess. Dr. Rolleston had not been able to find an exactly similar case. W. W. Keen recorded a case of recurring attacks of periostitis leading to abscesses which certainly extended over a period of eight years, and possibly longer; in this case various bones, the right humerus, both femurs, and the sternum, were involved in eight or ten successive attacks.

Mr. E. MUSGRAVE WOODWARD showed a case of Ectopia Vesicæ in a female child. The patient, aged 2, was suffering from extroversion of the bladder of congenital origin. The parents were perfectly healthy, and possessed two other children, a boy aged 6 and a female infant aged 6 months, both of whom were of normal development. The mother stated that when three months pregnant with this child she received a severe blow in the abdomen following a fall, and it was to this she attributed the deformity. The patient was a quiet, happy child, but exhibited well-marked bony signs of rickets in the head and lower extremities and a high-vaulted palate, and she did not yet run alone. The symphysis pubis was wanting, and the pubic bones were badly formed, there being a gap in the pelvic ring anteriorly of 2 inches. The bladder wall in front was absent, and its posterior wall was represented by a convex area 1½ by 1½ in. in diameter, and covered by red granulations. On the surface of this area the ureters opened at the apices of their papillæ, that on the right side being placed ¼ inch below that on the left, and jets of urine could be seen to be projected from these orifices alternately at frequent intervals. The urethra was represented by a deep groove which led from the bladder area above to the anterior surface of the hymen below, and was fringed on either side by the bifid clitoris and the cleft anterior end of the labia minora. The vagina, hymen, perineal septum, and rectum were normal.

Mr. KIDD showed a case of Congenital Deformity of the Femur: absence of the upper femoral epiphysis and half the shaft of the left femur. The patient was aged 1 year and 5 months. From birth the left leg had been shorter than the right. Palpation revealed that the left femur was less than half the normal size. Movements at the hip were too free in all directions. The child could flex, extend, adduct, and abduct the thigh. The skiagram showed that the upper half of the shaft of the femur and the upper femoral epiphysis were absent. The upper end of the bony shaft was conical; the lower end and epiphysis appeared normal. There were no other deformities and no sign of nervous disorder.

Mr. CECIL ROWNTREE showed a case of Carcinomatous Degeneration. The patient was a woman, aged 67, who for 27 years had had an affection of the skin of the loin of doubtful nature. Eleven years ago carcinoma of the breast developed and amputation was carried out (section shown). Two years after the operation ulceration made its appearance in the centre of the patch of dermatitis, and gradually extended until at the present time there was an excavated ulcer some three inches in diameter. The condition had undergone considerable improvement under X ray treatment, but previous to this possessed the typical features of squamous-cell carcinoma.

Dr. CHAPMAN showed a case of Deformity of the Hands. On Feb. 23rd, 1900, Dr. Chapman showed two cases (father and son) of deformity of the hands, with absence of a radius in the child, at the Clinical Society. The cases were fully reported, with reproduction of skiagrams, in Vol. XXXIII. of the Clinical Society's Transactions. The son was now shown so that members might see how well the boy (now aged 15) could write.

Dr. WILFRED HARRIS and Mr. W. H. CLAYTON-GREENE communicated a paper on the Treatment of Acute Suppression of Urine by Incision of the Kidneys. The paper was based on the results of four cases of suppression of urine occurring suddenly owing to intense congestion of the kidneys. Two of the cases (Nos. 1 and 4) were under the care of Dr. Harris, the first for gastric ulcer which perforated, the fourth case for corrosive-sublimate poisoning. In each case the treatment adopted was a lateral incision in the loin, and after exposing the kidney a cut was made through the convex border of the kidney substance deep into the pelvis of the kidney, the cut being about an inch in diameter. After controlling the hæmorrhage, which at first was free, by plugging, a drainage-tube was inserted into the pelvis of the kidney. The result in each case was almost immediate return of the excretion of urine, which was passed both by the drainage-tube and also by the bladder. In some cases it appeared that operation upon one kidney might be sufficient. In Case 4 both kidneys were incised, the right kidney on the third day and the left on the fifth day after suppression commenced, or on the fourth and sixth days after the swallowing of the corrosive sublimate. The ultimate result was practical cure of the hæmorrhagic nephritis, between 30 and 40 oz. of urine being passed daily. Death, however, took place in this case on the sixteenth day from exhaustion due to the severe colitis resulting from the excretion of the drug by the large bowel.

EDINBURGH OBSTETRICAL SOCIETY.

Adenoma Vaginæ.—Development of the Vagina and Hymen.—Superfœtation.

A MEETING of this society was held on May 10th, Dr. F. W. N. HAULTAIN, the President, being in the chair.

The PRESIDENT read notes of a case of Adenoma Vaginæ. The patient, aged 35, consulted him in September, 1896, for a copious watery discharge. He found a swelling of the anterior vaginal wall, protruding slightly from the vulva and simulating a cystocele. It was hard, well defined, and of about the size of a walnut. The vaginal walls were of an extremely pink colour, secreted a copious watery discharge, and presented the appearance of a cervical erosion. The swelling, though apparently well defined, was extremely difficult to enucleate. On section it presented the appearance of a fibro-adenoma. A portion of the vaginal wall removed at the same time was found to be infiltrated with an adenomatous structure, closely resembling a cervical erosion. Subsequently he thoroughly scraped the vaginal wall and swabbed it with tincture of iodine. She improved for some months after the operation; but the discharge returned later, so that a second curetting was carried out and the surface swabbed with carbolic acid. This again stopped the discharge for 18 months, after which it returned and the vagina showed the same pink colour. As the patient was averse to further operation astringent douches were prescribed, but little benefit resulted. The patient was not seen again until June, 1910, when the vagina had the same pinkish colour with warty protuberances on the surface. A small portion removed for examination showed the same adenomatous character as previously, but much more exaggerated, the glands penetrating the squamous epithelial covering and dipping deeply into the muscular tissue. The copious watery discharge had continued more or less for eight years, and there was no evidence of ulceration, and no irregular hæmorrhage had occurred. Some discomfort was felt in the bladder, but little pain. She grew gradually weaker and died from asthenia. No post-mortem examination was permitted. There can be no doubt that the case was a typical example of a diffuse adenoma of the vagina, simple in its early stage, but later becoming what might be called adenoma malignum. A similar case in its early stages had been described by Bonney and Berkeley, and considered by them as unique. In these days of thorough surgical interference the President in a

similar case would not hesitate to remove the uterus and the vagina.

Dr. D. BERRY HART read a paper on Adenoma Vaginæ Diffusum (Adenomatosis Vaginæ), with a critical discussion of the development of the vagina and hymen (with lantern demonstration). Dr. Hart briefly referred to the condition first described by Bowley and Glendinning, and also to the President's case, who was the first to meet with the condition and whose case ultimately took on a malignant form. He pointed out that the vaginal tract arose from the Müllerian ducts, and that at the sixth or seventh week the two ducts coalesced in the genital cord and became lined with a low columnar epithelium; a lumen was, of course, present. At this time the urino-genital sinus was relatively long, the Müllerian ducts ending blindly in a distinct projection on its posterior wall—the eminence of Müller—while the Wolffian duct opened into the sinus below this. At the third and a half month the future vagina was solid, the Müllerian epithelium gone, and at the lower end of the sinus two bulbs had developed, and these had an epithelium exactly similar to the squamous vaginal epithelium of the adult woman. Into one of these bulbs Dr. Hart had traced the Wolffian duct. Dr. Hart discussed the hostile views of Nagel, Webster, Gellhorn, Taussig, and Wood Jones as to the development of the vagina and hymen. Recently Bolk and Spuler had confirmed Dr. Hart's views. In the development of the vagina and hymen the ducts of Müller were usually considered as the source. The urogenital sinus was a factor, however, and had been neglected. The vagina was Müllerian only in its upper two-thirds; in its lower third it was derived from the urino-genital sinus and the Wolffian ducts. The hymen was really a structure in the urino-genital sinus and of the Wolffian ducts. Diffuse adenoma vaginæ was due to an incomplete replacement and absorption of the primitive Müllerian epithelium by that of the Wolffian ducts, ectodermic in their origin. The practical suggestions were that such cases, in view of the ultimate result of the President's case, should be treated by curetting and transplantation of skin flaps from the vulva or by excision of the vagina.

Dr. A. E. TURNBULL (Dorset) sent notes of a case of Superfœtation. The patient was a primipara, aged 24 years, and at the time of her confinement was about six and a half months pregnant according to her reckoning. The first child was delivered with forceps; the membrane of the second child was then ruptured, and the child was born shortly after. There was a single large placenta, with a single chorion and two amniotic sacs. Along with the placenta another body was expelled which proved to be a third ovum, complete and healthy in appearance, the fœtus being of the size of a three months' growth. The twins only survived a few hours; they seemed to be about six and a half months in development. Dr. Turnbull considered that fertilisation of the third ovum had occurred in the fourth month of pregnancy, before the decidual space had become obliterated.—Dr. HART remarked that the difference in size of the third ovum did not necessarily indicate a later conception, as in plural conceptions the sizes of the fœtuses might vary greatly.—Dr. JAMES RITCHIE, Dr. B. P. WATSON, and Dr. G. KEPPIE PATERSON also made remarks on the subject.

DEVON AND EXETER MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held at the Royal Devon and Exeter Hospital on May 12th, Mr. J. M. Ackland, the President, being in the chair.—Dr. J. Delpratt Harris showed the following cases, all of whom were or had been under his care in the electrical department of the Devon and Exeter Hospital: 1. A girl with Raynaud's Disease and Innumerable Chilblains. She had received marked benefit from the constant current in the first instance and latterly from the high-frequency condensation couch. 2. A lad with well-marked Vegetative Lupus of the Nose. Finsen-light treatment was being applied to one side and CO_2 to the other. 3. A girl with Psoriasis Form of Lupus improving under X ray treatment. 4. Lupus Vulgaris in a middle-aged woman. The ulcer was treated by zinc ions and X rays applied to the surrounding tissues. 5. A case of Lupus Circumscriptus cured by X rays. 6. Two cases of Alopecia treated by ultra-violet condenser spark light, with perchloride of mercury and acetic acid locally. 7. A boy with Tuberculous Adenitis and Scrofuloderma. Marked improvement followed treatment with the X rays. 8. A man with Sciatic Neuritis of apparently traumatic origin, in which the leg below the knee had motor and sensory paralysis. The interrupted constant current with the rhythmic regulator was the apparent means of recovery, which was complete with the exception of the extensor muscles.—Dr. Harris also exhibited X ray photographs illustrating fractures in the neighbourhood of joints.—Mr. A. C. Roper showed a man in whom there was a somewhat unusual swelling of the shoulder. Sarcoma, hæmatoma, and gumma had all been considered in the diagnosis, with a preference for the last-named owing to the influence of iodide of potassium on the tumour.—Mr. E. L. Sturdee showed for Dr. W. Gordon a man, aged 27, suffering from Paroxysmal Tachycardia, who had been under Dr. Gordon's care in the Exeter Hospital in 1910, and readmitted in April this year. Mr. Sturdee, who read an account of the case taken from his own notes, said that the man attributed the onset of his symptoms to a severe strain received at work in 1909. He was employed on the railway. He first noticed something "rip," and after a few minutes had a great desire to defæcate, and on going to stool passed about a teacup of pure blood. He soon became very short of breath but was able to do his work for six weeks, subsequently being under constant medical care for seven months, first at home and afterwards in hospital. He then returned to work for three months, but was always worn out by mid-day. Eighteen months ago he was first admitted into the Devon and Exeter Hospital for attacks of shortness of breath and throbbing in the neck, together with a feeling of general weakness. During the paroxysms there was occasionally accompanying pain with a duration of about a minute. With regard to his family and personal history, the only matters to note were an attack of typhoid fever when aged 11 and his excessive smoking—180 to 200 cigarettes of a cheap kind having been his weekly consumption. Latterly he had been abstemious in this respect, and in all other ways it would appear that his life had been most temperate. On admission there was little to note as regards the circulatory system with exception of systolic throbbing in the veins of the neck, and a diffused apex beat. There was no increase in the cardiac dulness as evidenced by percussion. On auscultation the sounds were short and sharp—fœtal quality; there were no adventitious sounds. In other respects the man appeared to be normal. The pulse-rate, which on admission was 180, considerably lessened in frequency after a week's treatment, and then for a time was from 60 to 70, now and then quickening to 120, and then for a further period of two months there were variations with wide excursions between slow and rapid pulses, 28 and 180 being the furthest extreme. Gradually improvement set in and he was discharged on Nov. 18th, 1910, with a full steady pulse of 80 to 90. After a period at a convalescent home he was treated as an out-patient and returned to his work on the railway. This he found too much for him, and he attributes to it the relapse which now finds him again an in-patient since April 17th. For the first ten days of his readmission the pulse varied between 80 and 140, but since then it has remained full and regular between 58 and 80. (N.B.—When exhibited the pulse-rate was 140 and the heart sounds fœtal in character, and no doubt this was a temporary disarrangement owing to the excitement of the occasion.) With regard to treatment, prolonged rest in bed has undoubtedly been a powerful factor in bringing about improvement. As to drugs, no cardiac tonics appeared to benefit unless combined with vascular dilators—e.g., nitrites and iodides, strophanthus and sodium iodide being the most successful combination during the first admission. During the last month the liquid extract of ergot and tincture of belladonna in small doses have undoubtedly benefited him.—Mr. G. L. Thornton read notes on a case of an Acute Infection with Splenomegaly and Marked Lymphocytosis.—Dr. R. V. Solly gave a demonstration on Kala-azar, illustrated by slides kindly presented by Major C. Donovan, I.M.S.

OXFORD MEDICAL SOCIETY.—A meeting of this society was held on May 12th at Littlemore Asylum, Mr. A. P. Dodds-Parker being in the chair.—Dr. Ray gave a short account of Hydatid Disease, and held that the best results in treatment are seen when the cyst is emptied, filled with normal saline solution, and again sewn up. No necrosis occurs, the fluid is gradually

absorbed, and the cyst gradually lessens. Suppurating cysts can only be treated by drainage.—Mr. T. S. Good gave an account of Dementia Præcox, and illustrated his paper by demonstrating certain features in five patients, three females and two males, showing various stages and types of the disease. It is a disease of adolescence and affects primarily the will and the judgment. The persons affected are between the ages of 13 and 25; there is almost always a hereditary weakness from insanity or alcohol. The immediate causes of the nervous breakdown are over-pressure at work or cramming at school. Injury to the head and tuberculosis are often associated with the disease. The symptoms may take one of many types and the form of mental ailment may change from day to day. The patient may be impulsive, apathetic, restless, and suicidal or homicidal, and one of the earliest features of the disease is an abnormal desire for solitude. Memory is good, and the patient is aware of his surroundings. The circulation is always poor and the pupils are always dilated and sluggish. A vacant, silly laugh is often seen. Treatment, when the disease is established, leads to no permanent good. Even if recovery is seen the patient relapses. Mr. Good urged the importance of treating these cases before the disease was established. Mentally unstable children, children who are often bright at school to an unusual degree, should not be unduly pressed, and any form of cramming in such children was certain to bring disaster.—Dr. W. W. Read then read the notes of two patients who had already been shown to the society. One who was demonstrated was a girl, aged 19 years, a cretin, who had been treated for a year by thyroid extract. She was very much improved, had grown 2 inches in height, and had put on 8 lb. in weight. Her health was good and she was able and willing to do a fair amount of work in the ward. Owing to her being deaf and dumb much mental improvement was hardly to be expected. The second patient had died in the asylum. His condition on entry had been one of locomotor ataxia with optic atrophy; his mental symptoms, which were not marked at first, had become definitely those of general paralysis. The condition of his spinal cord and brain had confirmed the diagnosis that this was a case of mixed general paralysis and locomotor ataxia.

BRADFORD MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on May 16th, Dr. W. Mitchell being in the chair.—Mr. F. W. Goyder gave a Microscopical Demonstration and showed a case of Erb's Paralysis.—Mr. J. Basil Hall showed the following specimens: 1 Two intestinal cases which simulated Appendicitis: (*a*) Strangulation of Ileum by band. Enterectomy with resection of 20 inches of gut. Recovery. (*b*) Carcinoma of Transverse Colon with Localised Abscess following Perforation. Abscess incised and drained; secondary colectomy; recovery. 2. Volvulus of the Sigmoid. Complete sigmoidectomy with primary suture of colon to rectum; recovery. 3. Carcinoma of the Rectum associated with Uterine Fibroid. Hysterectomy and amputation of the entire rectum by the abdomino-perineal method; recovery. 4. Carcinoma of the Rectum associated with Pelvic Abscess. Hysterectomy and amputation of the entire rectum by the abdomino-perineal method; recovery. 5. Carcinoma of the Os Uteri, involving Left Ureter and Bladder. Wertheim's hysterectomy with resection of 2 inches of the ureter and part of the bladder wall; re-implantation of ureter into bladder; recovery. 6. Multiple Uterine Fibroids; acute symptoms from torsion of pedicles. Subtotal hysterectomy; recovery. 7. Two large Goitres associated with Tachycardia, Tremors, &c. Relief of the symptoms after partial thyroidectomy. 8. Villous Tumour of the Bladder. 9. Phosphatic Concretion round the handle of a crochet needle removed from the bladder of a girl.—A discussion ensued in which the following took part: the President, Mr. Goyder, Dr. Rabagliati, Dr. T. J. Wood, Mr. J. J. Bell, and Dr. F. W. Eurich.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.—A meeting of this society was held on May 5th, Dr. A. Christy Wilson, the President, being in the chair.—Mr. R. Lawford Knaggs read a paper on the Growth of Osteo-Sarcoma.—Dr. E. F. Trevelyan showed: 1. A man, aged 26, with Muscular Atrophy limited to the Shoulder Girdle Muscles of seven years' duration. All movements at the shoulder were possible but weakened. There was marked fibrillary twitching and no pseudo-hypertrophy. The patient was practically in the same state as when seen five years ago. 2. A girl, aged 3 years, who had sustained an injury 18 months previously, from which time the loss of power was dated. There were paralysis and wasting of most of the muscles of the shoulder girdle, but external rotation was still possible. There was dropping of the head of the humerus. The diagnosis lay between injury to the joint and brachial plexus and an independent infantile paralysis of the upper arm type.—Dr. A. L. Whitehead showed a case of Keratitis Punctata and Choroiditis treated by "606."—Dr. T. Churton showed a case of Hæmorrhage in the Brain illustrating the value of differential temperatures in diagnosis.—Dr. C. Oldfield showed a case of Intestinal Obstruction due to strangulation by band connected with degenerated fibroid tumour of the uterus.—Mr. A. Gough showed Vincent's Organisms from a case of Pyorrhœa Alveolaris and from a case of Pseudo-membranous Tonsillitis.—Mr. J. F. Dobson showed a Meckel's Diverticulum Opening at the Umbilicus. Enterectomy was performed.—Dr. W. H. Maxwell Telling showed: 1. A Button Removed from the Vagina of a Child aged 7, where it had lain for three months. At the commencement of this period there had been a sanguineous discharge which was taken by the mother for a period. 2. A case of Anæmia Splenica Infantum in a child of 11 months. The child was a Jew and a twin and showed marked signs of rickets.—Cases and specimens were also shown by Mr. H. Collinson, Dr. T. Wardrop Griffith, Dr. J. B. Hellier, Mr. H. J. Roper, Mr. W. Gough, and Mr. Michael A. Teale.

Reviews and Notices of Books.

A Text-book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. By ARTHUR R. CUSHNY, M.A., M.D. Aberd., F.R.S., Professor of Pharmacology in the University of London; Examiner in the Universities of London, Oxford, Cambridge, Manchester, and Leeds, and to the Royal College of Surgeons of England; formerly Professor of Materia Medica and Therapeutics in the University of Michigan. Fifth edition, thoroughly revised. Illustrated with 61 engravings. London: J. and A. Churchill. 1910. Pp. 744. Price 15*s.* net.

PHARMACOLOGY, like all experimental branches of biological science, must of necessity be in a state of flux, and therapeutics, although theoretically an application of pharmacology, is itself largely a matter of experiment, formerly empirical, but now daily becoming more carefully and rationally designed. Any text-book devoted to these subjects must therefore require frequent revision to eliminate material out of date and to incorporate new matter. Professor Cushny's well-known text-book has already achieved a position as a standard work, and we welcome the appearance of a fifth edition, which has obviously been subjected to a careful and eclectic revision. The subject of the relation between chemical composition and pharmacological action, from which so much was hoped a few years ago, has dwindled in importance, and is dismissed with brief discussion. The tendency to attribute the effects of drugs more to their physical characters is recognised by Professor Cushny, and special attention is paid to considerations of ionisation, salt action, osmosis, and other physical considerations; but he is careful to avoid giving undue preponderance to these principles, and he deprecates regarding them as the only mechanisms involved in drug actions.

The classification of drugs adopted is practically that of Buchheim and Schmiedeberg, in which the substances having the most points of resemblance in regard to their pharmacological activities are grouped together, independently of their origin, chemical nature, or therapeutic uses. Organic substances, characterised chiefly by their local action, constitute the first main group. Under this heading are considered demulcents, emollients, flavouring agents, bitters, volatile oils, skin irritants, vegetable purgatives, astringents, and anthelmintics. In connexion with the action of the

simple bitters upon the digestive system, the explanation given is that they increase the psychical secretion of gastric juice, and it is also hinted that the effects may be due in part to suggestion. The subject of counter-irritation is discussed fully in the light of the observations of Head and Mackenzie. The vegetable purgatives are divided into groups—viz., the purgative oils, the anthracene purgatives, and the jalapin and colocynthin group. The special manner of their actions and their therapeutic uses are in each carefully indicated.

The second group deals with organic substances characterised chiefly by their action after absorption. This comprises most of the drugs of vegetable origin, the coal-tar products, and some substances of synthetic nature having definite pharmacological actions upon the various bodily functions. The accounts given of the narcotics of the methane series, alcohol, general anæsthetics, and soporifics are clear and exhaustive. In particular we may mention the descriptions of the actions of alcohol and chloroform, which is admirable in its lucidity and impartiality where matters still in dispute are concerned. Recent work upon the effects and uses of adrenalin is incorporated in the section dealing with the actions of that substance, and in regard to ergot the results of the researches of Barger, Dale, and others are succinctly epitomised, with the result that the description of the pharmacology of that substance is simpler and more intelligible than it has been before. The actions of ergotinine, which is almost inert, of its active hydrate, ergotoxine, and of tyramine are differentiated from one another. In regard to the therapeutics of digitalis and allied substances, more especially in conditions of cardiac irregularity, the results of the work of Dr. James Mackenzie are quoted and his views briefly indicated.

The third group comprises the combinations of the alkalies, alkaline earths, acids, and allied bodies. Under this heading the action of the saline cathartics is described in simple terms and rendered intelligible. The fourth group is composed of the heavy metals. Their general method of action and their similarities are first pointed out and then each is considered separately. In connexion with these two groups the recent observations of Ehrlich upon certain arsenic and mercury compounds in regard to their effects upon trypanosomes and some other protozoa are referred to. In the fifth group ferments, secretions, and toxalbumins are included, and brief descriptions are given of the chief antitoxic serums. Menstrua and mechanical remedies are classed together in the sixth group. In a short appendix drugs are classified in tabular form according to their therapeutic use.

This book is a standard work upon pharmacology, and can be recommended with confidence, as on previous occasions, to students and practitioners.

The Experimental Chemotherapy of Spirilloses (Syphilis, Relapsing Fever, Spirillosis of Fowls, Framboesia). By PAUL EHRLICH and S. HATA. With contributions by H. J. NICHOLS, New York; J. IVERSEN, St. Petersburg; BITTER, Cairo; and DREYER, Cairo. Translated by A. NEWBOLD and revised by ROBERT W. FELKIN, M.D., F.R.S.E., &c., late Lecturer on Tropical Diseases, Edinburgh Medical Schools. With 34 tables in the text and five plates. London: Rebman, Limited. 1911. Pp. 181. Price 12*s.* net.

MANY medical men who have seen results which have been obtained with an injection of salvarsan in syphilis have wished to have a fuller account of the theory of the use of the drug and of the lines of investigation which led to its discovery, and this book is just what is required for this purpose. Ehrlich's work started from the idea that when a chemical substance acts in the living body on an organ it must become incorporated with the tissues of that organ, and by analogy the same idea was extended to the action of chemical substances on bacteria and other low organisms. Much work had been done with the trypanosomes, and that has already been reported, but very little work had been done on the spirilla, when Hata, at the suggestion and under the direction of Ehrlich, made an extensive series of experiments with the object of discovering a remedy for syphilis. The spirilla employed were those of relapsing fever, of the spirillosis of fowls, and of syphilis. In the experiments the different drugs were first examined as to their sterilising capacity in the test tube and then in an animal. In this way a large number of substances were investigated and those were noted which were especially active in destroying the spirilla. Then the next point to be investigated was the relative toxicity of these substances when compared with their power of destroying spirilla. After a time it was found that certain chemical constitutions of drugs were associated with a powerful action on the spirilla, and attempts were made to prepare substances built on this chemical plan in order to discover which of them was the least poisonous to the human body. In this way, fully detailed in the work before us, "606" was found to possess in the highest degree the power of destroying spirilla and at the same time it was seen that it was comparatively but slightly toxic to man.

The first half of the book is written by Hata, the following chapters on the action of "606" on spirochæta pertenuis in the animal body by Henry J. Nichols of New York; those on the chemotherapy of relapsing fever by Julius Iversen of St. Petersburg; and those on the cases of relapsing fever treated in the Cairo Infectious Hospital, by Dr. Bitter and Dr. Dreyer of Cairo. Lastly comes a chapter by Ehrlich on the chemistry of "606," on the technique of the practical testing of drugs, and on the chemotherapy of trypanosome diseases. The book should prove of interest to all concerned in these new advances in treatment. The elaborate investigation which led to the discovery of "606" is a model of what such scientific work should be, and future researches must follow very much along the same lines. This volume contains the most satisfactory account of the scientific basis on which rests the use of salvarsan.

Maladies de l'Appareil Digestif et de l'Appareil Respiratoire. By Dr. H. HUCHARD. Paris: J. B. Baillière et Fils. 1911. Pp. 504. Price 12 francs.

THIS volume forms one of the series of "Consultations Médicales" written by the late Dr. Huchard which have been received during the last few years with great success. The style adopted is that of a lecturer rather than that usually used in a text-book of medicine. In a large number of the subjects discussed the remarks are based upon actual patients, and they are essentially practical, vague theories being excluded. Many morbid conditions are described which do not find their way into the usual text-books or treatises on medicine.

As the title indicates, this volume is devoted to diseases of the digestive organs and of the respiratory system. Amongst the conditions described are the various forms of dyspepsia, cancer of the stomach, and the condition known as "false cancer of the stomach." By the latter term is understood a non-malignant malady which, owing to the presence of a predominant symptom or a group of symptoms, may cause the differential diagnosis from carcinoma to be one of considerable difficulty. Amongst the conditions which may be placed under this heading are mentioned hypertrophic gastric sclerosis (Andral), inflammatory indurations, and syphiloma of the stomach. Growths in the neighbourhood of that region may also give rise to difficulties

in diagnosis. This chapter is an interesting one, and will well repay perusal. The various aspects of hepatic colic are also discussed. Amongst the diseases of the respiratory system described, are acute œdema of the lungs, diaphragmatic pleurisy, unusual forms of bronchitis, such as the uræmic and muco-membranous forms, and certain points in the early diagnosis of pulmonary tuberculosis.

Handbuch der Gesamten Medizinischen Anwendungen der Elektrizität einschliesslich der Roentgenlehre. Vol. I. By Prof. Dr. med. H. BORUTTAU and Prof. Dr. med. H. MANN. Leipzig: Werner Klinkhardt. Pp. 599. Price, paper, M.30; bound, M.32.50.

WE are dealing here with a series of volumes on the subjects of medical electricity and radiology which are written by various authors. The first one is entirely devoted to medical electricity and is edited by Professor Boruttau of Berlin and Professor Mann of Breslau. Among the list of contributors we see the names of Batelli, Bergonié, Wertheim Salomonson, and others, which are a sufficient guarantee that in the completed work we are to have a compendium that is complete and in keeping with the very latest ideas bearing upon this rapidly changing branch of medical work.

We need not dwell upon the first hundred pages of the first volume; they constitute a very full treatise on the physical aspects of electricity, especially as it concerns medical work, and are profusely illustrated. The second section is by Dr. G. Bredig of Heidelberg and deals with physical chemistry and electro-medicine. Here the whole question is considered from the purely physical basis, the body being regarded as a membranous bag filled with various tissues and colloidal substances immersed in saline solution. The writer goes very fully into the principles underlying ionic medication, and is at times very abstruse; in fact, his mathematics are often beyond the range of the average physician. Later we have a well-illustrated description of the various appliances used in medical electricity, including batteries, coils, resistances, interrupters, and measuring instruments. This section, as well as the next following, is by one of the editors, Professor Boruttau, and where the author is dealing with electro-physiology we have one of the most interesting sections in the whole book. The subject is treated along scientific lines; the quantitative data for the galvanic and faradic irritability of the various tissues are suggested, and there is also described a method of determining the irritability of a tissue through the medium of condensers. In the section on electro-pathology the same writer dilates upon the alterations in the reactions of the various tissues when influenced by diseased conditions. The last section of the first volume is by Professor Battelli of Rome, and deals with electrical injuries, a branch of electro-medical work that becomes of daily increasing importance. On the subject of electrocution the writer shows that where a high voltage is used death is the result of inhibition of the higher nerve centres, whereas a lower voltage paralyses the heart by fibrillary contraction. In the case of accidental shock the patient is more likely to be resuscitated by artificial respiration if the voltage has been high than if it has been low.

It has been decided to divide the second volume into two parts, and the first portion is devoted entirely to electro-diagnosis. It contains three chapters. The first of these is on general diagnosis from the pen of Dr. J. Zanietowski of Krakau. The point that will attract chief attention is the author's method of muscle-testing by means of condenser discharges. This he considers a more accurate quantitative agent than the faradic or galvanic currents. The upper limit, for instance, is more easily observed, since the condenser discharge is quite painless; thus stronger currents are possible and there is less variation in the normal limits of excitability. As an example, he states that the facial nerve requires for stimulation under normal conditions from 18 to 19 volts, whereas the limits with the faradic and galvanic currents are much wider than this. Also in pathological conditions the voltages are very widely separated. Taking the same area, if tetanus is present 9 volts are sufficient, but in cases of facial palsy 54 volts are necessary. There seems little reason to doubt that the condenser will take an important place in electro-diagnosis where accuracy is required. On pp. 224 and 225 are excellent plates illustrating the motor points. On the left side of the figure the points are shown on the surface, while on the right side they are shown in relation to the dissected muscles.

The second section of this part is on the electro-diagnosis of nervous diseases and is written by Professor Mann. The subject has been treated very exhaustively, and among the interesting observations we note one to the effect that in cases of migraine the electrical resistance of the head is greater than normal, and is also greater on the affected side than on the sound side not only during the attack but for some time afterwards. This portion of the work concludes with a brief article on the electro-diagnosis of the psychoses. It is here shown that in many of these conditions there is a well-marked lengthening of the phase of muscular contraction which may persist for as long as half a second. This has been more particularly noticed in acute mania, dementia, and alcoholic paranoia.

The next portion of this second volume will deal with electro-therapy and should be awaited with great interest, seeing that it is being produced in collaboration with many of the best-known specialists on the continent.

An Introduction to Biology for Students in India. By R. E. LLOYD, M.B., D.Sc. Lond., Indian Medical Service, Professor of Biology (*pro tem.*) in the Medical College of Bengal. London: Longmans, Green, and Co. 1910. Pp. 298, with 15 plates of diagrams. Price R. 4, or 5*s.* 4*d.*

OWING to the new regulations enforced by the Government of India it has become necessary for students who wish to graduate in medicine at the Calcutta University to obtain a knowledge of the structure of animals by dissection. The anatomy of vertebrate types is described in many good text-books, but the common invertebrate animals of Bengal, which are peculiar to the province, have not been described hitherto in any text-book in a form suitable for students. It is also very necessary that the types so described for dissection should be animals sufficiently common, so that they may be obtained in large quantities. In the United Kingdom even protozoa can be conveniently obtained by purchase, but in India this is not the case, and the source of the material for Indian student classes must be as certain as in other countries. The types selected are not in all cases those required by the Bengal University syllabus, and some of the types mentioned, such as Euglena, Sphenopus, Eunice, Bipalium and certain echinoderms, cannot be obtained in sufficient quantities for classes which may number as many as 150 students. The author has treated his subjects well; his chief endeavour has been to awaken the interest of his students, and the subject matter of his text-book shows the result of observation and close study. The first seven chapters are devoted to details concerning protozoa, porifera, cœlenterata, triploblastica, annelida, platyhelminthes, nematodes, mollusca, arthropoda, crustacea, arachnida, and insecta. The last chapters of the book deal with the unity and diversity of living things, evolution,

adaptations, variation, and heredity in a plain and simple manner. Of these subjects it is at times difficult to decide what should be taught to students about such debateable matters, but as they are fast growing in importance at the present day the author very rightly introduces them to the notice of his student classes.

The book is well finished, the type and index are good, and it should fulfil the useful purpose for which it has been so carefully compiled.

The Anatomic, Histological Processes of Bright's Disease and their Relation to the Functional Changes. Lectures delivered in the Russell Sage Institute of Pathology, City Hospital, New York, during the Winter of 1909. By HORST OERTEL, Director of the Russell Sage Institute of Pathology, New York. Illustrated. London and Philadelphia: W. B. Saunders Company. 1910. Pp. 227. Price 21s. net.

THE definition of Bright's disease and the pathology of the varieties into which it has been classified have always been highly controversial matters, and even at the present time there is no unanimity in the standard text-books of medicine in regard to these questions. In the book before us, which is a noteworthy contribution to the pathology of nephritis, Dr. Oertel gives in original, critical, and scientific manner a careful review of the structure, both macroscopic and microscopic, of the kidneys in those conditions which have been generally included under the heading of Bright's disease. Although dealing with the subject chiefly from the standpoint of the structural alterations to be observed in the kidneys, he is careful to regard these changes as the outcome of processes, and not merely as morbid alterations of form and structure. In other words, he endeavours to keep always in view the functions of the parts he describes. Dr. Oertel believes that in such a direction there is a useful future for pathological anatomy, for he states that "it can no longer be satisfied to describe and disclose *tissue changes*, but it must construe the plan of the whole *pathological organ*."

After an interesting historical introduction, in which most of the descriptions usually adopted are critically discussed, Dr. Oertel gives the classification that he has adopted in his own work. He limits the term Bright's disease to the non-specific, hæmatogenous, non-purulent inflammations of the kidney, and we are glad to note that he prefers to employ the word nephritis and qualify it by some descriptive adjective. He separates nephritis simplex, in which there are varying combinations of parenchymatous degenerations and inflammatory œdema, from forms in which certain inflammatory attributes predominate, which are described as nephritis degenerativa, exudativa, hæmorrhagica, and prolifera. If fatty changes predominate, the condition is referred to as nephritis degenerativa adiposa. Where connective tissue growth is a marked feature the condition may be designated nephritis degenerativa et productiva or nephritis productiva according to whether degenerative features are prominent or not. In the second lecture the structure of the normal kidney is described and a clear and lucid analysis is given of the different views current as to the manner in which the kidney carries out its functions. In the third lecture the degenerative and exudative features of nephritis are considered. An admirable description is given of the kidneys in nephritis simplex, which practically corresponds to the acute diffuse nephritis of other writers. In connexion with the more chronic forms of exudative nephritis Dr. Oertel discusses fully the much-debated question of the relation of the degenerative lesions observed in such kidneys to the inflammatory process, and comes to the conclusion that they are to be regarded as inflammatory phenomena. He also insists that a localisation of the inflammatory process to one particular portion of the kidney substance does not occur, and that therefore it is incorrect to speak of glomerulonephritis. The histological features of the different parts of the kidney are described in detail and illustrated by many excellent micro-photographs. The formation and nature of casts and cylindroids are also fully dealt with. The fourth lecture is devoted to a consideration of the results and terminations of degenerative and exudative nephritis. Dr. Oertel believes, in common with Löhlein and other observers, that many cases of supposed primary contracted kidneys, or, as he prefers to call them, productive nephritis, are in reality secondary, being the outcome of previous degenerative exudative lesions. He then describes the characters of the degenerative fatty nephritis, as he prefers to call the large white kidney, and discusses the origin and nature of the fatty substances contained in the kidney cells. In the concluding part of the fourth lecture he commences the consideration of the connective tissue changes; and in the fifth he considers them in detail under the heading of productive nephritis. He believes that there is no essential difference between primary and secondary contracted kidney, except in the localisation and progress of the disease, and that both are really secondary to previous degeneration and exudation—in one with a latent, in the other with an active, course. In conclusion, he refers to the arteriosclerotic, or senile, kidney, which he describes as sclerosis or atrophia renum, and separates from nephritis.

It will therefore be seen that Dr. Oertel gives a clear and intelligible idea of nephritis as a continuous process, and that he practically returns towards the original conception of Bright, who, as Dr. Oertel says, took a uniform view of the whole nephritic process. We can strongly commend this book as a thoughtful, scientific, and suggestive presentation of a difficult subject. It is well printed and contains some admirable coloured plates.

A Treatise on Treatment. Designed for the Use of Practitioners and Students of Medicine. By JOGENDER LAL CHUNDRA, L.M.S. Calcutta; late Lecturer on Anatomy, College of Physicians and Surgeons, Calcutta, &c. With charts and illustrations. Calcutta. 1911. Pp. 684.

IN preparing this book Mr. Chundra has evidently referred to many authorities and monographs, and in describing the treatment of any given disease he gives a *résumé* of the more important recommendations which have been made in regard to it, and often adds his own practice. Not infrequently brief tabular summaries of the chief symptoms of the condition precede descriptions of the treatment. In many instances the information is given in outline or in categorical form; in others, more detailed directions are supplied. Prescriptions are given in full in nearly all instances, and many of them are of the "blunderbuss" variety, some containing as many as nine ingredients. Questions of diet are fully dealt with, and in many instances Indian foods and medicaments are described. In regard to most conditions many alternative forms of treatment, both general and symptomatic, are given, and the name of the authority recommending it, often incorrectly spelt, is usually appended. The writer frequently inveighs against the neglect of preventive measures in India, notably in regard to small-pox and leprosy, and he urges the provision of sanatoriums for the treatment of pulmonary tuberculosis. In some cases the advice given appears to us distinctly dangerous—e.g., in regard to the treatment of appendicitis, Mr. Chundra, after referring adversely to the view of numerous authorities, including Professor W. Osler and Professor Dieulafoy, that there is no medical treatment for this condition, goes on to recommend opium and morphine, and brushes aside the objection that they mask the symptoms. Again, the statement that a quarter of a grain of cocaine hydrochloride given

three times a day in milk will cure nervous dyspepsia is pernicious and might easily be productive of grave consequences if taken seriously.

It is impossible not to admire the labour and energy which must have been expended in the preparation of this book, and doubtless it contains a great deal of useful information. At the same time, its value would have been greatly increased if the author had been more sparing in his choice of recommendations, and if more care had been expended upon proof-reading, for incomplete sentences are frequent and misprints, especially in proper names, are very numerous.

The Sources and Modes of Infection. By CHARLES V. CHAPIN, M.D., Sc.D., Superintendent of Health, Providence, R.I. New York: John Wiley and Sons; London: Chapman and Hall, Limited. 1910. Pp. 399. Price $3.00 net, or 12*s.* 6*d.* net.

THIS is an interesting, and in a way remarkable, book, and it has already attracted many readers. It has, moreover, appeared at a time when there is prevalent a spirit of unrest in connexion with many epidemiological problems, and when there is special need for a pilot to keep the ship of preventive medicine in the right course in the numerous cross-currents through which she has to pass. Unfortunately, Dr. Chapin is not exactly that pilot, and consequently his book, useful and instructive as it is in many ways, is somewhat dangerous and misleading, especially to those who are not able critically to examine the conclusions at which he arrives.

These are the days when our minds are full of the influence of carrier and unrecognised cases, and there can be no question that our views are being materially modified by these two factors. But nevertheless, it is very easy to overdo the part which they may be playing in the spread of disease, and thereby to under-estimate the importance of what may be termed general sanitation, and this is what Dr. Chapin has succeeded exactly in doing. At the end of the first chapter, which deals with the life of disease germs outside the body, we find this startling expression of opinion which we quote in full: "But except for one or two diseases, and except for very indirect effects, the cleansing of streets, alleys, and backyards, of dwellings and stables, the regulation of offensive trades, and the prevention of nuisances generally have, so far as we can see, no relation to the general health, nor any value in the prevention of specific diseases." It is to be regretted that the author did not begin his book with some definition of preventive medicine, as, in our view, it is only some very contracted notion of the scope of sanitary science which could lead to such an opinion as that just quoted. Moreover, we find it difficult to reconcile such an opinion with that expressed after discussing contact infection in Chapter IV., wherein the municipality is enjoined to encourage cleanliness, the provision of public baths, the abolition of privy vaults, and the provision of a good sewerage system. But clearly, the author has not sought seriously to focus the newer knowledge, and he has in the main contented himself with references very largely of a bacteriological nature, from which he makes numerous and, in many instances, somewhat hasty generalisations.

In Chapter VI., which deals with the subject of infection by air, the author has taken a very limited view of air-borne infection. In his opinion neither influenza nor measles is to be regarded as an air-borne disease, contact being responsible for the spread of each. But there are many epidemiologists who would not quite accept this view and who would regard spray-borne diseases such as those just mentioned as air-borne rather than contact maladies, and they would take the same view of small-pox, the striking distance of which, altogether apart from the hospital influence question, is certainly considerable. Dr. Chapin discusses the theory of the aerial convection of small-pox in some detail, but he does not appear to us to have quite mastered all the literature of the subject. In his view the experiences of Edinburgh, New York, many German cities, and the Pasteur Hospital in Paris indicate that the theory in question has little basis in fact. But no mention is made by Dr. Chapin of the fact that in Germany the treatment of small-pox on the same site with other infectious diseases is admittedly only possible in consequence of the repeated revaccination of the whole community, while as regards the Pasteur Hospital the revaccination of all the patients upon the admission of a case of small-pox is practically a condition of admission to the institution. The author does not, we think, appreciate the undoubted danger of treating small-pox in populated localities, altogether apart from the fact as to whether spread is by personal contact or by air-transmission.

One of the more interesting chapters in the volume is the third, in which the value of isolation hospitals is discussed from the viewpoint partly of the limited American experience. Apparently the city of Providence, for which the author acts as medical officer of health, commenced to isolate cases of infectious disease in the year 1884, but no marked effect of such action has been noted. We are not, however, told what percentage of the patients suffering from any given disease has been isolated year by year. Dr. Chapin does not discuss in any detail the isolation of small-pox, but he gives us the interesting fact that owing to the large number of unrecognised cases of this disease the State Board of Health of Minnesota has advised that no attempt should be made to isolate cases of this disease, but that in coping with it entire reliance should be placed upon revaccination. This is one of the most instructive statements in the volume.

The book is well worth perusal, if only for the large amount of material and references which it contains, but those who read it should do so in a critical spirit. Unfortunately the interesting question of the seasonal prevalence of infectious disease, or the still larger one of climatic conditions in relation to such diseases is not dealt with by the author. Had he treated of these aspects of epidemiology the value of his interesting book would have been enhanced, and he might have been led to modify some of his conclusions.

Das System der Biologie in Forschung und Lehre: Eine Historisch-Kritische Studie. Von Dr. Phil. S. TSCHULOK, Zürich. Jena: Gustav Fischer. 1910. Pp. 409. Price 9 marks.

THE publication of a large work on biology and its relation to investigation and doctrine, extending to over 400 pages but containing no single new fact or theory, certainly requires some justification. The author is a doctor of philosophy and has set himself the task of giving a historico-critical investigation and study of the ideas pervading biology in the past and the present. Towards the end of a long and critical dissection of things botanical and zoological we find him dealing with the meaning of the word "biology" itself, for it has had very varied meanings as used by different authors and investigators, either in its broad sense or what is called "in its narrower sense," as defined by Ludwig, Wiesner, or Pearson. The author passes in review with keen critical dissection the development of the views on botany and zoology from the revival of learning in the sixteenth century to 1732, when description was chiefly an aid to classification. The first great step was the discovery of the cellular nature of plants by Malpighi, Grew, and Hook (1670–1680). Botany was not then treated as a science but as a help to medical

practice. The first period ends with Linnæus and his natural system of classification. He, however, set up no real "system" of botany. The author then passes in review the period from 1732 to 1813, and gives judicious commendation to Hill's Vegetable System, published in 1759. Then follows the period of de Candolle from 1813 to 1832, and, most important of all, that of the great reformer of botany, M. J. Schleiden, whose name is associated with that of Schwann in connexion with the cell theory. Schleiden's great work is admirably depicted, partly by the aid of quotations from Sachs's work on the history of botany. The author then passes in review the zoological systems, which naturally developed sooner than the botanical. The placing of this subject on a philosophical basis by Haeckel, in his System of Biology (1866–69), is admirably set forth. He then brings to notice the various attempts to classify biology, and postulates the following seven material aspects of biological investigation: (1) classification; (2) morphology; (3) physiology; (4) œkology (adaptation to surroundings); (5) chorology (distribution in space); (6) chronology; and (7) genesis of organic beings. After elaborate discussions of biology from the experimental aspect and in its biotaxic and biophysical point of view, he discourses on "general" and "special" botany and zoology and can find no perfect work on either. He concludes with a thoroughgoing criticism of what are to him the shortcomings of the modern text-books of botany—in German, French, and English—only to find that none comes up to his high philosophical standard. The author obviously aims at a high ideal, and has spent much time and thought on a matter of supreme interest to the philosophical naturalist.

There is no index, but there are added an alphabetical register of the books referred to in the text, which runs to five pages, and a pretty full summary of the contents included in each of the chapters.

Allen's Commercial Analysis. Vol. IV. Fourth edition, entirely rewritten. Edited by W. A. DAVIS, B.Sc., A.C.G.I.; and SAMUEL S. SADTLER, S.B. London: J. & A. Churchill. 1911. Pp. 466. Price 21*s.* net.

THIS volume deals with a most important group of substances, comprising the essential oils, resins, gutta percha, indiarubber, and rubber substitutes. The chapters on essential oils and resins necessarily include a reference to certain agents used in medicine as, for example, eucalyptol, peppermint oil, oil of anise, lemon-grass oil, cajuput in the former category, and asafetida, galbanum, guaiacum in the latter. Mr. M. Bennett Blackler, an admitted authority on the subject, has contributed the article on resins and Mr. Ernest Parry the article on volatile or essential oils. Special articles also on the hydrocarbons and ketones of essential oils are contributed by Mr. T. Martin Lowry, while Mr. Henry Leffmann and Mr. Charles H. LaWall, the only American writers in the present volume, have added a monograph on the special characters of essential oils. It will be seen, therefore, that this subject has received a wealth and detail of treatment for which its importance calls, and the editors may be congratulated on having secured the services of such an authoritative galaxy of writers on this interesting class of bodies. Apart from the medical bearing of many of the substances described, the methods of analysis directed to the detection of adulteration are of interest and are clearly the outcome of modern work upon the subject. When a group of substances as, for example, the resins, show a very complex and variable chemical composition the task of analysis is not an easy one and particular care has to be exercised to avoid fallacies. The article by Mr. E. W. Lewis on indiarubber, rubber substitutes, and gutta percha is very interesting. Here references are given to a number of substances (generally the subject of a patent application) which are offered as possessing the same remarkable properties as real rubber itself, and therefore available for the same purposes. Synthetic rubber, which has long been promised, has apparently not yet materialised with any success. The book is a valuable addition to the series, and shows, in our opinion, more careful treatment than some of the previous numbers.

LIBRARY TABLE.

The Coming of Evolution: The Story of a Great Revolution in Science. By JOHN W. JUDD, C.B., LL.D., F.R.S., formerly Professor of Geology and Dean of the Royal College of Science. Cambridge: The University Press. 1910. Pp. 171. Price 1*s.* net.—The terms of intimacy on which for many years Mr. Judd stood with all the great leaders in the modern evolution movement—Huxley, Hooper, Scrope, Wallace, Lyell, and Darwin—render him a very fitting chronicler of this transmutation of the world's thought. Mr. Judd insists on the barrenness of ideas unless translated into action, and has little sympathy with those who would detract from the glory of the men who patiently worked out the main principles of evolution and established it on a firm basis. Matthew Arnold once said, "It's all in Lucretius," but the difference between the guessers and the workers is immense. Mr. Judd traces the origin of the idea of evolution from the natural speculations of men in all ages as to the nature and causes of the things and events about them; considers the development of the idea of evolution as applied to the inorganic world; the subsequent triumph of catastrophism—the myth of successive destructions of the face of the earth, each followed by the creation of new stocks of plants and animals—over evolution; the revolt of Scrope and Lyell against catastrophism, with an analysis of Lyell's "Principles of Geology" and a discussion of the influence of his works; the early attempts to establish the doctrine of evolution for the organic world; Darwin and Wallace and the theory of natural selection; the origin of species; the influence of Darwin's works; and the place of Lyell and Darwin in history. The book contains portraits of Darwin, Scrope, Lyell, and Wallace. We commend the book to those of our readers who desire a bird's-eye view of the pathways through which science found her present high road.

Lepers, Thirty-six Years' Work Among Them. By JOHN JACKSON, F.R.C.S. With a Short Introduction by the Dowager Marchioness of DUFFERIN AND AVA. New and revised edition. London and Edinburgh: Marshall Brothers, Limited. Pp. 208.—The first edition of this book appeared in 1906, and contained a description of the labours of the Mission to Lepers in India and the East among patients at 78 stations. The present edition carries the account of the work up to 1910. The number of sufferers who are supported by the mission, or to whom its operations offer Christian teaching, reached at the end of 1909 a total of more than 10,000. This will indicate the vast amount of work which has been undertaken. An interesting account is given of the condition of the lepers at the various stations and the means which have been adopted for their relief. The former condition of the patients was most deplorable, but under the administration of the officers of the society their lot has been completely changed for the better. In 1908 Mr. Jackson was in a poor state of health, and six months' leave of absence was therefore granted him. He made a tour round the world, in the course of which he visited some of the society's stations in Japan and China, as well as several of the most important ones in India. An account is given of several leper stations in Japan, where

large asylums have been erected. The book is written for the information of the public and does not in any way profess to give medical details or discuss scientific problems. It is to be hoped that the work will have a large circulation, so that the labours of the mission may not be encumbered with financial difficulties.

Plant Life on Land Considered in Some of its Biological Aspects. By F. O. BOWER, Sc.D., F.R.S. Cambridge: At the University Press. 1911. Pp. 172. Price 1s. net.—This small volume, one of the Cambridge Manuals of Science and Literature, furnishes the reader with a succinct summary on broad lines of the present position of the botany of land plants. The meaning of botanical study is frequently misunderstood by the average person of education, and as Dr. Bower, the author of the volume, who is Regius professor of botany in the University of Glasgow, points out, the time-worn questions of the science are assumed to be still the living problems of to-day, and undue importance is frequently given to the mere finding and recording of new species and varieties. When, however, botany is approached from the point of view of the structure and characteristics of plants the subject becomes a fascinating one, especially when treated in the manner adopted by the author of this book. In a series of chapters, each suggested by some common features of the country, such as the beach and rocks, sand dunes, golf links, and stretches of bracken, he describes the various botanical features of the country, and the biologic struggle which has formed them. The relation between golf and botany does not at first sight appear obvious, but Dr. Bower shows clearly the part which plant life takes in the formation of the golfer's playground. Other chapters deal with the flower and metamorphosis and pollination and fertilisation, and the last chapter sums up the evidence indicating that the origin of plant life on land was from aquatic surroundings. The illustrations, of which there are 27, are clearly printed.

The Public Health Service Directory and Year Book, 1911. Compiled by the Editor of the *Medical Officer*. London: Hodgetts, Limited. Pp. 374. Price 7s. 6d. net.—We congratulate Mr. George S. Elliston on having produced a really valuable book of reference. It is true that in some cases it would be an advantage to the seeker after information if some of the entries were fuller, but the fault lies with those who have failed to give the author the required information, and it may be hoped that as the utility of the work is better known more interest will be taken in supplying the necessary details. The many difficulties of compiling books of references are only known to those actually engaged in the task. The book is really a guide to the whole of the work which is done under the Public Health Acts, including school inspection, and is divided into ten sections, dealing respectively with public authorities, education authorities, medical officers, public analysts, dental officers, veterinary officers, sanitary inspectors, women sanitary officers, isolation hospitals, and national and local health societies. Each section contains an alphabetical list of officers or institutions as the case may be, together with information regarding the persons or institutions named, and there are also various articles explaining such matters as the duties of the officers who give the heading to the section. A calendar setting out the dates of various functions, meetings of societies, and so forth, adds to the usefulness of a book of reference dealing with a subject the importance of which is growing year by year.

Origins and Meanings of Popular Phrases and Names. By BASIL HARGRAVE. London: T. Werner Laurie. 1911. Pp. 350. Price 6s. net.—The compiler of this work has produced an interesting list of names, epithets, popular expressions, and slang phrases from A1 to Zymotic, the definitions and explanations being generally all that the reader can reasonably desire. The compiler points out in his foreword that the book is not intended either as an exhaustive philological treatise or an academic encyclopædia, and he thus to some extent disarms criticism with regard to the contents of the book; but his decision to curtail the length of the list by including "only that which seemed of interest to him" has added to the size of the book by words like agnostic, Marconigram, Morse code, radium, and so forth—words with regard to the meaning of which most people nowadays are familiar. Those desiring an answer to the questions—How did such and such a place, building, street, or river obtain its name? will in many cases obtain the information required.

JOURNALS AND MAGAZINES.

The Journal of Physiology. Edited by J. N. LANGLEY, Sc.D., F.R.S. Vol. XLII., Nos. 1, 2, and 3. London: C. F. Clay, Cambridge University Press. 1911. Price 16s. 6d.—In No. 1 Mr. A. V. Hill's paper on the Position Occupied by the Production of Heat in the Chain of Processes Constituting a Muscular Contraction is highly technical, but very important both from a purely scientific point of view as well as from an economic one.—Mr. Joseph Barcroft's paper on the Effect of Altitude on the Dissociation Curve of the Blood is of special interest to the physiologist.—Mr. A. Harden and Mr. H. Maclean in a paper on the Alleged Presence of an Alcoholic Enzyme in Animal Tissues and Organs find that there is no satisfactory experimental evidence that alcoholic fermentation occurs in animal tissues after removal from the body, while their own experiments establish a strong presumption that no such process occurs. They also set aside the view that lactic acid forms an intermediate product in alcoholic fermentation. Alcohol found in tissues after removal from the body is probably not due to an alcoholic enzyme, as suggested by Stoklasa, but to presence of bacteria. Any alcohol found in the tissues can be accounted for by absorption of the alcohol formed in the intestine. In No. 2 Dr. E. P. Cathcart in a paper on the Pre-pyloric Sphincter confirms Beaumont's observation of the existence of a "transverse band" in the stomach, an observation made on Alexis St. Martin and published in 1838. By means of gastric fistulæ made after the method of Pawlow the presence of a pre-pyloric sphincter which can divide the stomach of the dog into two compartments is shown. The sphincter reacts differently to different solutions, while it becomes active during psychic stimulation, and is also controlled to some extent by the degree of acidity of the contents of the antrum pylori.—The papers by Professor N. H. Alcock and Mr. G. Roche Lynch on the Relation Between the Physical, Chemical, and Electrical Properties of the Nerves, and by Professor J. N. Langley and Mr. L. A. Orbell containing Observations on the Degeneration in the Sympathetic and Sacral Autonomic Nervous System of Amphibia following Nerve Section, are too technical to be conveniently abstracted in the space at our disposal.—Mr. Douglas Cow, writing on Some Reactions of Surviving Arteries, shows that all arteries do not behave in the same way to various forms of stimuli or drugs. Thus the coronary and cerebral arteries are dilated by adrenalin, whereas this drug produces constriction of all other arteries. The pulmonary artery outside the lungs is constricted by this drug, while the intra-pulmonary part is either not affected or dilated. The author has made observations on different arteries as to the dilating power of pituitary extract.—Mr. Fred. Ransom, discussing the action of caffeine on muscle, finds that when rigor of frog's muscle is excited by caffeine, lactic acid is formed and diffuses into a saline

solution and this acid disappears in the presence of oxygen. Diastase also diffuses into a saline solution.—The experiments on excitation and section of the auriculo-ventricular bundle by Miss Winifred C. Cullis and Professor W. E. Dixon are of very real importance. These authors describe their experiments in detail. They find that complete section of the bundle in the rabbit causes complete heart-block, and after an hour or two the ventricle assumes its own independent rhythm. This is a paper to be read both by medical men and by physiologists.—Professor D. Noel Paton and Dr. E. P. Cathcart show that the glucose of the blood is used by the mammary gland in the formation of lactose. In No. 3 the paper by Dr. F. G. Hopkins and Dr. Horace Savory on a Study of Bence-Jones Protein and of the Metabolism in Three Cases of Bence-Jones Proteinuria will attract the attention of clinicians. It gives the best account yet recorded of this remarkable form of proteinuria from three carefully observed cases.—In the paper by Mr. G. R. Mines we have an account of the substitution of strontium and barium for calcium and the effect on neuro-muscular mechanisms in the frog.

United States Naval Medical Bulletin. For the information of the Medical Department of the Service. Vol. V., No. 2, April, 1911. Issued quarterly. Washington: Government Printing Office.—Besides a mass of valuable information of a medical character of special importance to the medical service of the United States Navy, this *Bulletin* contains much that is of value to the medical profession at large. Its scope is limited to professional matters as actually observed by the service medical officers in all parts of the world—that is to say, the contributions are essentially practical. Passed Assistant Surgeons George B. Trible and Harry A. Garrison give a detailed account of the intravenous administration of "606" in 56 cases, including the technique and general régime adopted. They find that the most striking results have been obtained in the early stages, and the more severe the infection the more rapid and striking the healing. The authors consider the method, when properly used, indispensable as a rapid means of returning men to duty, and that, whether it proves to be a permanent or only a temporary cure, it should supersede the mercurial treatment in the first and second stages. The intravenous method they consider the most effective, simple, rapid, painless, and free from danger if proper care and judgment be used. "606" should not be given intravenously in a higher concentration than 1 to 500 or 600. Assistant-Surgeon E. W. Brown contributes a further note with reference to the preparation of a culture medium from dried blood serum, in which he points out that special care must be taken in the sterilisation of such media. He details his method of sterilising in the autoclave *in vacuo*, discusses the stability of the material, and recommends as a substitute for bouillon in this medium the use of fat-free dried milk. Intestinal parasites, particularly ankylostoma (faddishly spelled "agchylostoma," oblivious of the fact that γ before γ, κ, and χ, was always latinised as *n*, to conform to its Greek pronunciation), form the subject of notes and articles by Assistant-Surgeon W. M. Kerr, Surgeon E. G. Parker, Passed Assistant-Surgeon W. A. Angwin, and Surgeon C. B. Camerer. Passed Assistant Surgeon Gordon D. Hall describes the practical use of carbon dioxide snow as practised by Dr. Reginald Morton at the West London Hospital. Surgeon C. N. Fiske submits a tentative nomenclature for causes of physical disability in the navy, including a tabulated comparison of the terms used in the army and navy with those of the international nomenclature, as well as an expansion thereof, especially devised to meet the needs of the navy. The Work of the United States Naval Medical School Laboratories follows, and a description of an intestine tray for necropsies, and of a suggested improvement in taking finger-prints are given. The last-named consists in lightly dabbing the finger-tips with a gauze pad on which one drop of oil of turpentine has been dropped, which prevents moisture from interfering with the ink film on the fingers. The Clinical Section contains some cases of interest.

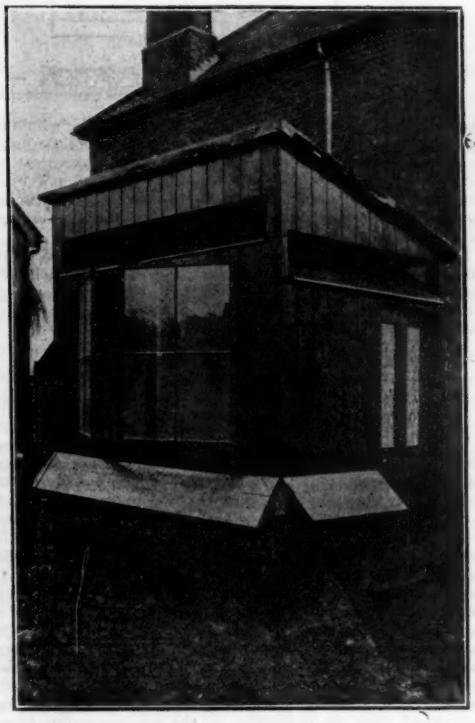
New Inventions.

THE PURE-AIR SHELTER.

THE first principle of open-air treatment is "the pure atmosphere freely administered without fear." Under ideal climatic conditions this could best be attained by a life in the open, the patient sleeping literally under the stars. In a changeable and uncertain climate various forms of shelter have been devised to protect the patient from rain while still exposed to the open air. The defect in the majority of shelters is that they are constructed with a view to keep out the rain, whereas the first essential of a shelter should be to let in the air. Moreover, in some shelters the amount of air entering can be diminished by the patient, and if windows and doors be shut to keep out rain the shelter is converted into a hut with little or no ventilation. Again, a very frequent defect is that the roof slopes downwards from back to front, constituting a cul-de-sac for the collection of polluted expired air. All revolving shelters, apart from mechanical difficulties, have the defect that their exposure is determined by the direction of the wind.

The Pure-air Shelter (Fig. 1) is a timber structure, made in

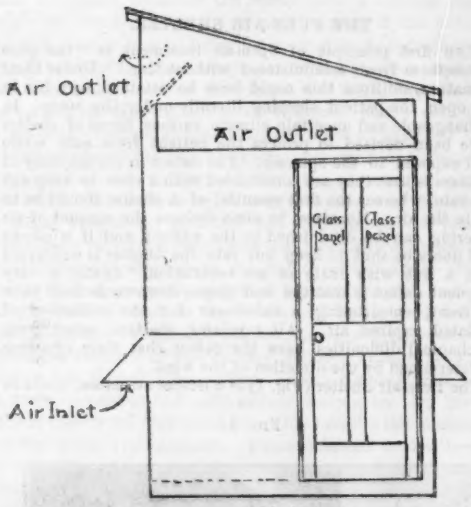
FIG. 1.



sections, easily put together, varnished inside, painted outside, and roofed with rubberoid. It is designed to ensure that the patient shall never breathe the same air twice, there being through ventilation in all conditions of weather, as even with the windows and doors shut, the shelter is open to

the air over an area of 56 sq. ft. This is attained by the use of everted and inverted planes (see Fig. 2), fixed at an angle of 45° and running round all sides, so that there is a constant exchange of air, while at the same time it is impossible even for driven rain to enter. When the patient is in bed the current of air is directed over his head and crosses the shelter diagonally. The use of these planes appeared to me to be the simplest structural method of ensuring direct ventilation. The shelter should be placed to face south-east, the front having a large French window,

FIG. 2.



DOOR SIDE ELEVATION

while the back should face north-west, with a smaller window. The lighting is devised to ensure the maximum of sunlight in all positions of the sun, but to avoid the discomfort of the morning and evening sun striking the patient's eyes direct. Thus the upper panels of the door are in glass, so that the early morning sun is thrown across the shelter but not on the bed.

A scale model of the pure-air shelter is at present with the Travelling Tuberculosis Exhibition. The Pure-air Shelter is designed and constructed, according to my suggestions, by George W. Beattie, builder, 296, Sandycombe-road, Kew Gardens, by whom the design has been registered.

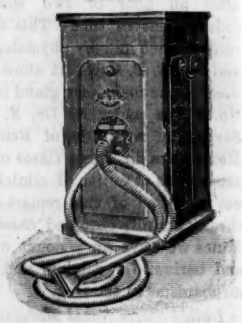
London, N.W. HALLIDAY SUTHERLAND, M.D. Edin.

THE "DAISY" VACUUM CLEANER.

THIS journal was one of the first to recognise that the proposal to remove dust by a vacuum process was an important economic and hygienic step which would sooner or later gain the approval of both the medical profession and the public. The vacuum system of removing dust is now firmly established amongst us, and machines made on a scale suitable for domestic requirements are rapidly replacing the unsatisfactory and insanitary broom in the household. Several mechanical improvements have been made during recent years, and the most noteworthy, perhaps, is a motor attachment by means of which the exhaust is produced by the domestic electric supply. A very useful hand machine also is now being put upon the market by The Daisy Vacuum Cleaner Co., Limited, Gravelly Hill, Birmingham. Its manner of working will be understood from an inspection of the accompanying illustration (Fig. 1). There is also a more powerful hand-worked machine made, the bellows being operated by a hand wheel. Finally, there is the electrically driven machine for use on the direct current, which is shown in Fig. 2. The machine, of course, dispenses with manual labour altogether, and the consumption of current is stated to be very reasonable. The machines are made in various sizes in accordance with the demands placed upon them. The accessories include nozzles for dusting heavy furniture, adaptors for cleaning ceilings, walls, and polished floors, a billiard nozzle, and a brush nozzle. In trials we made with the two types of apparatus the work was most efficiently

FIG. 1.

FIG. 2.



accomplished and the amount of dust removed from a carpet and arrested by the dust-bag astonishing. The bacteriology of this deposit would be interesting. We strongly approve of the system since it takes away the dust and dirt from the dwelling room altogether, whereas the broom removes a little and scatters the rest only to settle down again in other places, such as the bookshelf, the mantelpiece and the furniture of the room in general.

MARGATE CHAMBER OF COMMERCE. — The example set by the Chamber of Commerce at Margate might well be followed by the authorities of other seaside resorts. We should then, perhaps, hear less of the reproach so often levelled against our English watering-places that, healthful as they undoubtedly are, they are dull and uninteresting because little attention is given to providing social attractions which are a feature of continental health resorts. The Margate Chamber of Commerce was founded in 1899 and consists of an organisation of men which acts independently altogether of the municipal authority, and the members of which are bent upon developing the attractions of the place. "The objects of the chamber," we are told, "are to promote, advance, and protect the commercial and general interests of the port and borough, to assist in the development and improvement of the town, and to add to its attractions as an all-the-year-round health and holiday resort." Good progress has been made since its foundation, and excellent progressive work is being done, as was evident from the speeches which were made on the occasion of the fifth annual banquet, which was held on Friday, May 19th, in the Queen's Highcliffe Hotel. Sir James Crichton-Browne, who was the guest of the evening, referred to the healthful advantages of Margate, and pointed out that its salubrious qualities were established by the fact that a large contingent of England's young sons received their early education there. There was health for body and mind in the environment. He congratulated the Chamber of Commerce upon the excellent work they were doing in the direction of developing the hygienic and social attractions of the place. Dr. F. E. Nichol, who occupied the chair, referred to the satisfactory health statistics furnished annually by their medical officer, Mr. Bertram Thornton. It was a happy omen for Margate that an organisation like that of the Chamber of Commerce worked harmoniously with the corporation, and the best results were already being obtained by this amicable cooperation. Amongst the most noteworthy improvements which are being undertaken at the present time in Margate is the construction of a large winter garden on the front. The accommodation here will be adequate for the visitors, and it is hoped that the completion of this work will be the starting point of an all-year-round season.

THE LANCET.

LONDON: SATURDAY, MAY 27, 1911.

The National Insurance Bill.

WE published last week an expression of Mr. LLOYD GEORGE'S intentions in dealing with several of the salient medical questions involved in the National Insurance Bill, which will have been read for the second time in all probability before these pages reach our readers. Mr. LLOYD GEORGE is providing a large sum of money to cover the cost of securing medical benefits for the participants, compulsory or otherwise, in the scheme. He proposes to find some £4,200,000 for the provision of medical attendance, including drugs, dressings, and appliances used in domiciliary treatment, and concludes that this sum will permit an average payment of a capitation fee estimated at 6*s.* a head for each person insured. The £4,200,000 is made up in the following way: £3,800,000 represents the estimated cost of medical treatment, including drugs, at the present moment, while the Chancellor considers that the average payment of medical men engaged in club practice of all sorts is 4*s.* per annum per head. As he intends to raise that figure from 4*s.* to 6*s.* he has to provide £1,400,000 in addition to the £3,800,000, and to this total he adds £1,000,000 to be employed in the maintenance of institutions and sanatoriums for the prevention and treatment of tuberculosis. The Chancellor also proposes to provide the sum of £1,500,000 for maternity purposes, of which it seems likely that £500,000 may accrue to the medical men, probably on some such estimate as 10*s.* per case.

Mr. LLOYD GEORGE'S assurance that he intends to deal in a thoroughly generous manner with the medical profession is not being accepted, as our correspondence columns show well, while an article from a German contributor points out that the scheme falls far short from the medical point of view of the German model (see p. 1445). No one denies that the Chancellor is offering to find a large sum to be paid annually for the medical services to be received by the poorer sections of the community. But when we look into the figures closely we are bound to ask ourselves whether Mr. LLOYD GEORGE has realised the full possible effects of his own Bill. We think that he has not, or otherwise he would see that, so far from the medical profession as a whole being largely benefited under the scheme, many members will suffer greatly, while there is no proof that the additional income accruing to others will be commensurate with such losses. The real meaning of the enormous dislocation of practice that will take place has escaped his notice, and a capitation fee of 6*s.* for medical attendance and drugs and dispensing will by no means set the position of the profession right. There is no doubt whatever that the medical profession is much disappointed at the figure offered. How much may have to be deducted from the 6*s.* in respect of drugs and dispensing we do not know, but on no estimate can his offer to medical practitioners constitute a capitation fee of 5*s.* We shall be wholly surprised if on such a basis the Chancellor is able to make a friendly bargain with practitioners. The reasons for this view are as follows. The extremely poor pay which has been received up to the present by medical men engaged in contract practice makes the mere enlarging of the capitation fee no criterion that justice has been done. The fees hitherto have been in many cases disgraceful sweating. Secondly, the new work is going in some directions to be harder, as there will be so many poor lives. The £1,000,000 provided for treatment of tuberculous cases will only partially cover the ground, and when it is assumed that the removal of these cases from contract practice will much lighten the practitioner's work it has to be remembered that for the present at any rate a large number of the most expensive cases will remain on the practitioner's books for some time. Medical contract work must not be regarded as being lightened by the absolute cancelling of tuberculous cases, while it is increased by the addition of venereal disease. We recognise that the Chancellor, in finding a large sum of money to be employed for the relief of the sick-poor and for the building up in this country of a healthy, sound, vigorous, and prolific community, has proposed a great work, but we are not in accord with him in his belief that the share of the sum he is finding for medical benefits which will accrue to the medical man is sufficient to place the profession on a sound footing, or to remove the grave injustices which all allow to exist.

Not only, however, is the sum offered too small, but no notice is taken of the inevitable damage which the Bill is bound to inflict upon many sections of the medical profession in one direction, even if it removes grievances in other directions. In discussing the Bill we have regularly made the reservation that upon the capitation fee granted the justice of the proposals towards the medical profession mainly rests, unless the principle for work done can be considered; and we are in accord with the majority of our readers that a capitation fee of 6*s.* does not meet the case, for the medical profession as a whole will be a large loser in many ways if the Bill as it stands becomes law. It is perfectly true that the method and regularity of payment will to a great extent remedy that curse of general practice the bad debt, and this is perhaps the most substantial and tangible benefit which can be claimed for the measure, but the extent of that benefit must not be exaggerated. We have to consider what is the class which treats the medical man in a discreditable manner as to payment, and estimate how many of that class may be expected to avail themselves of the benefits under the Bill, having previously been the private patients of the practitioner. There will be a very heavy transfer of patients from private practice to contract practice, but it does not follow that many of this class obtain credit unjustly. We believe that the Chancellor has not taken into consideration the great value to the practice of the medical man of that group of earners of salaries and earners of high wages ranging between £100 and £160 per annum. Many of these patients, although they belong to clubs, wish to have private medical attendance; they prefer to choose the medical man they like, to see him at his house at other than club hours,

and to obtain his assistance at their own homes at times which are mutually convenient. Such patients will now be largely lost as private clients. The medical officer of the particular friendly society or club to which they will belong will obtain their capitation fees, and the question of whether their transference from private practice to contract practice is a benefit to the medical profession or not depends entirely upon the proportion of bad debts which such medical practice brought in. It is our impression that these were not the patients who incurred regularly liabilities which they were unable to discharge, either immediately or at some reasonable interval. And, in towns at any rate, bad debts among the extreme poor are not common, for as a rule such patients are treated upon a cash basis. While much good work is done by medical men in poor districts, and while the labour and devotion given in return for tiny fees are very great, we cannot regret that in this direction there will be alterations under the scheme. It is certain that only too often the small fee is wasted, the amount of good which the medical man can do, in all the circumstances, being negligible. The replacing of this kind of practice by a reasonable contract system is certainly for the public good, and is a step forward in the scientific position of the profession, but we are not at all clear that it means any increase in the emoluments of the medical man, for at these surgeries, or as they are called frankly "shops," no bad debts are made. But the patients here are the proper subjects of contract practice, which certainly cannot be said of persons in receipt of weekly wages of £2 or £3. With regard to the benefit done to the medical profession by relief from bad debts, we find that far too much stress has been laid upon the proposals of the Bill. With regard to the absolute ignoring of a wage limit for beneficiaries, the matter must be pressed upon the Chancellor's consideration.

And there is this last point which should be brought to the Chancellor's attention, as it certainly constitutes a very strong claim for generous attention to the medical position. Nobody can deny the fact that an enormous dislocation of practice is going to take place, which means a decrease in the value of a very great number of connexions built up and established on the old basis. The medical man will no longer be able to regard his practice as a perfectly saleable piece of property for which he could very often obtain two years' income. Many practices must go down in value if the Bill passes, even though quite a large capitation fee be obtained from the Government, and there will be considerable difficulty in finding purchasers for them, as no medical man will be able to guarantee that a substantial proportion of his patients may not transfer themselves from his private books to his contract lists, and what this may mean is well shown in an article from "Two Practitioners" which appears in our issue this week. Time may right such matters for younger practitioners, but those who have arrived at middle age, or who have progressed further, are certainly feeling that the Bill has caused a grave depreciation of the pecuniary results of their life-work. The Chancellor will have to bear this point in mind, and we trust that it may influence him to give a sympathetic hearing to the numerous reasonable protests against the Bill which he will receive in its further Parliamentary stages.

The Board of Education and the London County Council.

IN recent issues of THE LANCET[1] will be found in brief the history of the conflict between the Board of Education and the London County Council respecting the medical inspection and treatment of school children. Matters have proceeded a stage since our last report of them. The Board of Education has now accepted the assurances of the Council that "by October, 1911, the scope of the medical treatment scheme will be clearly defined and that substantial progress will have been made toward its efficient working." But as we have pointed out, if the recommendations of the Children's Care Subcommittee be ratified by the County Council as the supreme educational authority of the metropolis, the medical officer for education will be definitely and wholly placed under the supervision of Mr. BLAIR, the Council's educational officer, a layman, to whom he will be responsible as chief of the department. In the recently published report of the Children's Care Subcommittee, which has since been adopted by the Education Committee, reference is made to the memorandum of the Board of Education (1907), in which that Board expresses the opinion, in discussing the subject of the medical inspection and treatment of children attending public elementary schools, that the work should be carried out in intimate conjunction with the public health authority, under the direct supervision of the medical officer of health. The memorandum further suggests that, generally speaking, the work of medical inspection should be supervised by the medical officer of health of the authority which appoints the Education Committee. The subcommittee acknowledges the defects of the system at present in vogue in London; and in discussing the necessity for reorganisation states the opinion that the present division of the work between two different departments—viz., the school medical officer's, which deals with inspection, and the education officer's, which deals with treatment—has injuriously affected the working of the Council's scheme. The subcommittee considers it important that the arrangements for medical treatment should be associated with those for medical inspection, and that, in order to ensure the proper working of the system, the entire administration should be entrusted to one and the same department.

Up to this point we fully agree with the subcommittee, but, after setting forth what appears to us invalid objections to the adoption of the recommendations of the Board of Education, the subcommittee proceeds to resolve that the work at present performed by Dr. KERR should be definitely incorporated in the Council's educational department, and placed under the control of the Council's education officer, who should be responsible to the Council for the general administration of the work of medical inspection and for the arrangements for medical treatment. At the same time the subcommittee, feeling that the freedom and initiative of the education medical officer in expert advice, opinion, and investigation should be adequately safeguarded, states that he should have a

[1] THE LANCET, Feb. 25th (p. 520), March 4th (p. 627), and March 18th (p. 760), 1911.

position of access to all the subcommittees of the Education Committee, and have the right to report to them directly. A resolution to the foregoing effect was carried by the subcommittee against an amendment to entrust the supervision of the work to the medical officer of health of the county. The amendment sought to carry out the principles of the Board of Education, whereby the education medical officer would be responsible to the medical officer of the Council, both on the professional and on the administrative side. But it failed. Unless, therefore, the resolution, which now stands, is overruled by the General Purposes Committee or by the County Council as the supreme authority, London will present the anomaly of an educational authority entrusting to a layman the medical inspection and treatment of the entire child population under its care. We hope sincerely that the General Purposes Committee of the Council, under the advice of its special committee now sitting, will refuse to concur in the views of the Children's Care Subcommittee. The Board of Education in every one of its recent circulars, as well as in its earlier general memorandum of 1907 before referred to, has urged the association of the medical work of the Education Department with that of the medical officer of health, and the convenience of this identical arrangement has been insisted upon by THE LANCET in many other circumstances. In the interests of the rising generation of the metropolis the question to be decided by the County Council is, in our judgment, of transcendent importance. It is no less than this: whether the care of our school-children's health is in future to be divorced from that of the rest of the population and handed over to the lay head officer of the Education Department; or whether it is to be retained as an integral charge upon the work of the Public Health Department, to be supervised by the chief medical adviser accordingly.

The Report of the Children's Care Subcommittee certainly makes out at first sight a case for the supervision of the medical inspection and treatment of the Council's school children by the non-medical education officer. But the more closely the arguments in favour of this course are examined the less conviction do they carry. The subcommittee's conclusion that the only satisfactory solution of the present problem is to "place the whole of the school medical work in close organic connexion with the general administration of education" is plausible. So, too, is its objection that the detailed work of administering medical inspection and treatment, so far as merely clerical services are concerned, is unsuited to expert medical officers and wasteful of their energies. But in our opinion there are far stronger arguments in favour of a "close organic connexion" of the school medical work of London with the public health service, and there is no reason to suppose that the necessary supervision of administrative details would distract the educational medical officer from his more strictly professional duties. The proposal of the subcommittee is opposed to the whole system of departmental classification adopted for the best of reasons by the London County Council, whereby matters relating to one profession are controlled by an officer who is a member of that profession. The establishment of a new medical service under the control of a layman would not only be contrary to the general policy of the Council, but would be a reactionary step at a time when the need for greater consolidation and centralisation of the medical service of London is becoming more and more recognised. The objections which the subcommittee raises to the adoption by London of the course already taken with success by the other education authorities of the kingdom, at the instance of the Board of Education, seem to be rather artificial. The very speciality of the metropolis forms, in our opinion, an argument in favour of, and not against, the incorporation of the medical inspection and treatment of school children in the Public Health Department. The medical care of the rising generation is undoubtedly and pre-eminently a question of public health. The proposal to put an important and increasing medical department under lay authority is without precedent, and forms a faulty basis for future constructive work.

The Ancient Office of Coroner.

AT a recent meeting of the Medico-Legal Society Dr. F. J. WALDO read an interesting and instructive paper upon the history of the coroner's office, so far as it is traceable, and upon its duties and powers. Apparently our legal historians, including no less authorities than Lord COKE and BACON and ending with Sir JOHN JERVIS, have all been wrong in asserting that the coroner's office was instituted by King ALFRED with that of the sheriff, both being designed to aid in keeping the peace when the earls gave up the wardship of the county. Thus neither the coroner nor the sheriff any more than the neglect of cakes is now to stand to the credit of the great Saxon monarch, the origin of the error with regard to the coroner having been the statements of one ANDREW HORN who wrote on the laws of the Anglo-Saxons in his book the "Mirror of Justices," compiled during the reign of EDWARD I. It is true that there is at least one allusion to the coroner as a Saxon officer of justice in a document which has passed as genuine in its day, a rhymed version of a charter attributed to King ATHELSTAN; but modern criticism finds the first unquestionable reference to him by his venerable title in a record of the year 1194, and we are advised to attribute the institution of his office to the innovating Norman invader at some date not far anterior to this.

Be this as it may, for many centuries the coroner has been an officer of considerable importance to the State, but in the Middle Ages this was not merely on account of any usefulness on his part in bringing malefactors to justice. It is true that over them he had at one time a wider and more general jurisdiction than he now enjoys, for if we may believe the "Mirror of Justices" (already referred to as untrustworthy), coroners were wont to "hold their views" upon the occurrence of many serious crimes, and besides these on "infant monsters who had nothing of humanity or had more of the beast than the man in them." These may have been treated as occasions for the raising of revenue on the ground that they were due to the sinfulness of the parents; but whether they were so or not, the importance of the coroner to the State was not in respect of such part as he

might play in bringing the felon to justice, but arose from his interest in the forfeitures to the Crown, for the recording of which he was responsible. These were not confined, in the case of death, to the property of a person who could be held directly responsible, but included animals and instruments to which loss of human life might be traceable. The "deodand," to the appraising of which the coroner's inquiry was directed, was not necessarily levied in kind, or at any rate at a very early date a pecuniary value was put upon it and taken as a substitute. And it went originally, we are informed, to the Church, but later to the King, a transition explained by Sir EDWARD COKE as due to the latter being "GOD'S lieutenant on earth." In the City of London deodands swelled the revenues of the City authorities. An interesting instance of a deodand is cited by Dr. WALDO, from which it would appear either that the corporation was not over-grasping or that a medical coroner would have been useful to it in order that the death might have been ascribed to its true cause. It happened in 1278, in the parish of All Hallows in the Bread-street ward, that a 'prentice named JOHN DE ALDENELE descended into a well by a ladder in order to recover some staves which had fallen from one of the old wine casks with which the walls of the well were lined. He never came up alive, and his fellow apprentice, JOHN PATOYS, who went to his rescue, died also, just as with us one sewerman who seeks to save another one overcome by sewer-gas loses his own life. The report of the inquest, however, upon ALDENELE and PATOYS, although it ascribes the death of these two men to "bad air and the fumes of the casks," which had held new wine, records that the deodand was imposed with regard, not to the value of the well or its contents (which, however, may have been because they were not chattels), but was assessed upon the ladder off which they fell, 4*d*. being the sum for the extraction of which from the owner of the ladder the sheriff eventually had to be answerable. Deodands would be an important source of revenue in these days of motor-cars and omnibuses, and perhaps the certainty of their imposition would increase the caution of drivers, but they were abolished by statute in 1847, and the forfeiture of the goods of convicted felons ceased in 1870. Later still the Coroners Act of 1887 put a final end to the interest which a coroner once took by virtue of his office in felonies other than those resulting in death, in the landing of royal fish, and in wrecks. He now fulfils almost exclusively the useful, if painful, duties which we associate with his name, until we are reminded by cases of alleged treasure trove, or by inquests upon non-fatal fires in the City of London, that his functions were once more numerous and their objects not confined to the protection of human life.

To review in an evening the history of the coroner's office from the point where its first beginnings are lost in the mists of the twelfth or of some earlier century, to summarise its present position and to discuss its probable future, constituted a formidable task for a lecturer to undertake. Dr. WALDO therefore did not dwell long upon the developments and changes proposed by the recent Departmental Committee on Coroners or indicate at any length his own views concerning them. Possibly the discussion of these may have been reserved for another evening by the Medico-Legal Society, for the topics raised are eminently medico-legal in their nature and can hardly be debated too thoroughly before legislative change is introduced. Coroners' inquests are now governed by an Act passed in 1887, which might have needed amendment less after 24 years' use if it had been discussed more thoroughly beforehand by such a body as that which Dr. WALDO addressed, one in which the medical profession is strongly represented. We note, however, a brief allusion made by Dr. WALDO to the proposal to enable a coroner to order a medical man to hold a post-mortem examination without first deciding to hold an inquest upon the body in question. We gather from this passage in his paper and from the evidence given by Dr. WALDO before the Departmental Committee, as well as from his observations at a recent inquest held by him, that his experience as a coroner leads him to regard the suggested innovation with rather marked distrust. It is one, however, the demand for which has to a large extent come from coroners, and although those of their number who appeared before the committee were not unanimously or whole-heartedly in its favour, the weight of evidence was sufficient to convince the committee that the power suggested might be given, and their report recommended it without any question as to its desirability. As Dr. WALDO remarked in his paper, that report did not say who should make the post-mortem examination, or whether the report of the pathologist should be made in open court, or on oath, nor did it indicate with any precision the manner in which it should be made; but we conceive that the principle of the recommendation having been accepted by Parliament and embodied in a statute, details would be provided for by regulations which, being rules and not Acts of Parliament, could be modified as experience might show alteration in them to be desirable. That an authority should be appointed to make rules in connexion with the coroner's office was another recommendation made in this report by the committee. The law at present orders inquests to be held when there is reasonable cause to suspect a violent or unnatural death or a sudden death of which the cause is unknown, and we conceive the object of it to be that persons guilty of murder or manslaughter, or of improper conduct not amounting to either of these, may be brought to justice or held up to public disapproval, or that conditions which have caused death in a certain case may be fully recognised and so avoided in the future.

In the old days a sudden death was a proper subject of inquiry owing to a possibly resulting deodand, but now inquests are for the purposes indicated above, and there can be no doubt that the general feeling of the public, the wishes of surviving relatives, and the desires of those who seek economy in the administration of public funds, are against their being held when no public good can result from them. It is for the coroner to decide whether there may be before him a case of sudden death of which the cause is unknown, and in order to ascertain what evidence may exist upon the subject he makes inquiries generally, and more particularly from any medical man who, he conceives, may be entitled to inform

him on the subject. There can be no difference of opinion in the medical profession that proper provision should be made for inquiries of this kind, leading with certainty to the best available information legally procurable being placed in the coroner's hands. At present there is the difficulty that he cannot pay a fee for it, and also that a proper answer for him to receive on some occasions is that the appearances, combined with the informant's knowledge, if any, of the deceased, point distinctly to a certain natural physical condition as the cause of death, and that post-mortem examination will show with certainty whether this is correct. If a necropsy were to show that the previously entertained opinions were correct, and if there were to be no other evidence pointing to an inquest, the local authority would save the expense of an inquest, and the feelings of relatives to whom it might prove distressing would be spared. If the examination did not corroborate the opinions entertained before it was held, or if it were to reveal unexpected conditions, then the coroner would have to decide what to do, just as he has now, but with fuller and more certain information to guide him. As we understand the recommendation of the Departmental Committee and the views expressed by coroners and public authorities in favour of the suggested change, the object aimed at is to enable the coroner to decide in as many cases as possible whether a death which has been brought to his notice is beyond doubt a natural one, or whether it may be due to violence or some other unnatural cause, or whether it may be due to some agency as to which his preliminary inquiries afford him no definite information. With regard to the cause unknown, there is no importance in its being determined and pronounced upon by a jury of citizens so long as it can be ascertained with certainty what it is, and so long as there is no reason to suspect a violent or unnatural death; the essential object is that the causes of death should in all cases be recorded with certainty, and that full inquiry should take place where there is reason to believe that blame may be imputed. The result of enabling a coroner to eliminate altogether by an early post-mortem examination those cases which in existing circumstances he may feel fairly certain will end in a verdict of "natural causes," will be to increase his responsibilities truly, but not to lessen his labours or to diminish his usefulness. The coroner will, however, clearly be best able to avail himself of the proposed change, should it be made, when he is qualified for his post by training in the profession of medicine. His appreciation of the result of post-mortem examination, whether laid before him privately or publicly, will then be such as to secure the best possible results, involving the most certain and satisfactory administration of justice.

THE sixth annual meeting of the Convalescent Homes Association will be held in the committee room at 32, Sackville-street, London, W., on Wednesday, May 31st, at 4.30 P.M., when Sir William S. Church will occupy the chair. The report for the past year will be submitted, and the honorary secretary will explain what has been done by the association to further the interest of convalescent homes since its establishment in 1905.

Annotations.

"Ne quid nimis."

THE ROYAL SOCIETY FOR THE PREVENTION OF CRUELTY TO ANIMALS AND EXPERIMENTS ON ANIMALS.

THE Royal Society for the Prevention of Cruelty to Animals has done invaluable work in the past, and its officers are rendering excellent service in the cause of humanity and the relief of animal suffering. But there are signs that the society is in danger of falling from the high position which it has held for so many years in the esteem of sensible and sober-minded people. It has been obvious for some time past that a certain section of its members has been laying plans to mould the policy of the society with regard to animal experiments into that of the most fanatical of anti-vivisectionist societies. This section of the society made its presence felt in a regrettable manner at the eighty-seventh annual meeting, which was held last week, and we feel sure that the great majority of members and well-wishers of the society will deplore the line taken up by Mr. Stephen Coleridge and certain others who so nearly succeeded in driving Lord Cheylesmore and Mr. Stewart Stockman from the council of the society, and who actually carried a motion, by 55 votes to 48, calling upon Lord Cromer, as president of the Research Defence Society, to resign his position as vice-president of the Society for the Prevention of Cruelty to Animals. We cannot believe that the 55 persons who voted against Lord Cromer's re-election, or the 59 who voted against that of Lord Cheylesmore, on the grounds that office in the Research Defence Society is inconsistent with office in the Royal Society for the Prevention of Cruelty to Animals, really expressed the feelings of the latter society. The aims and activities of these two admirable organisations are not incompatible. The Royal Society for the Prevention of Cruelty to Animals has a great past; but much of its usefulness will be hindered and its dignity will be imperilled if it is committed to an intolerant policy to suit the wishes of a faction. As to the 55 persons who voted against Mr. Stockman's re-election because he holds licences for animal experiments to inquire into animal diseases, we again cannot accept theirs as the true voice of the society. We trust that the great body of members will take steps to dissociate themselves from the narrow-minded opinions expressed at the annual meeting, and to atone for the act of discourtesy to Lord Cromer, whose great services to the suffering animals of Egypt deserve the gratitude of all humanitarians.

EXCESS OF INFANT MORTALITY IN IRISH TOWNS.

WHEREAS the rate of infant mortality in the whole of Ireland has long been considerably lower than the rate prevailing in the whole of England and Wales, the infantile rate in Irish towns has recently shown a marked excess on the rate that prevails in the largest English towns. During the 52 weeks of last year the proportion of deaths under one year of age in the 22 town districts of Ireland was equal to 132 per 1000 registered births; in 77 of the largest towns in England and Wales, during the same period, this rate of infant mortality did not exceed 115 per 1000 births. In Dublin the rate of infant mortality during last year was equal to 142 per 1000, while in London it did not exceed 103; it was also equal to 143 in Belfast, to 111 in Londonderry, 125 in Limerick, and 124 in Waterford, but did not exceed 96 per 1000 in Cork. Even in the 16 smallest of

these Irish towns, each of which had in 1901 a population below 15,000, the mean rate of infant mortality last year was equal to 106 per 1000, exceeding the rate in London, with an estimated population little short of five millions, by 3 per 1000. The proportion of deaths under one year to births registered affords a fairly trustworthy test of the health condition of a population, and has, at the present time, the additional advantage of not being invalidated by uncertainty as to the local numbers of urban populations. The unsatisfactory health condition of the Irish towns, compared with that of the far larger English and Welsh towns is, indeed, beyond doubt, and it is, moreover, a fact that the death-rate at all ages in these Irish towns shows a far larger proportional excess on the same rate in the English towns, than the rate of infant mortality, although this excess cannot be accurately measured until the results of the recent Census are available.

EDUCATION "AL FRESCO."

"THE visitor to the Forum Romanum (and in these days his name is Legion) may witness," writes an Italian correspondent, "an educational method interesting in itself, well worthy of being considered, and, where possible, of being adopted in practice. He will see relays of little boys, about the 'fourth-form age' in English schools, taken round the monuments and informed as to the events associated in chronological sequence with each. In that great centre of Roman life, Republican and Imperial, the boy is thus made to realise, with a vividness not to be derived from books, the evolution of the historic drama, in contact with many of the features, architectural and artistic, among which it was enacted; surrounded, moreover, by the landscape and even the 'nature' present to the old *dramatis personæ* themselves. Another day the said visitor may witness on the much-frequented Pincian Hill—the 'Valhalla of Rome,' so called from its assemblage of busts of the national heroes placed *en évidence* on the initiative of Mazzini in 1849—the same or similar relays of boys conducted by their teachers and examined *viva voce* as to the career or the moral characteristics of each personality in succession. Placed before the bust of Marius, for example, the first boy is asked to give from his private reading a brief account of that great plebian soldier, an account supplemented, when necessary, by a second or third boy; and then, the company having moved to the bust of Sulla, the patrician rival of Marius, a fourth or fifth boy is made, in turn, to describe the career of that mighty captain, the account being also corrected or illustrated by fresh details from another classfellow. And so, day by day, or week by week, the boys are familiarised with the national history, not only in the 'sculptured presence' of the chief actors in the same, but in the environment, more or less immediate, in which they lived and moved. All this instruction, be it added, is conveyed in the open air, with walking exercise and with a use of the voice and respiratory system under the freshest, the healthiest, of conditions—in what contrast to those of the traditional school-room with its vitiated atmosphere and the physical constraint imposed by bench or 'form'! The same instruction, at a later stage of the boy's education, is given as to the social life of his ancestors—in the Colosseum, for instance, with its illustration of Roman amusements, in the Baths of Caracalla, with their evidence of the Roman respect for the body in the elaborate provision for personal cleanliness and physical exercise, culminating in the yet nobler advance in the spiritual sphere as attested by the Catacombs and the gradual decline of paganism before Christianity. Of course, there is the objection that the instruction, the educational methods, referred to are seen under exceptionally favourable circumstances in Rome, with its concentrated *ensemble* of monuments and treasure-trove, architectural and artistic—above all, with its steady climate, whose fine, or at least fair, weather may be counted on for days, if not for weeks, in succession. Granted; but may not in other communities an approach to *al fresco* instruction be made by special accommodation, giving shelter, while not excluding free ventilation, such as is seen in the 'porticoed hall' not unfamiliar on the continent? Even in the British Isles, 'the rain, it rains not every day'; while some such protection from atmospheric vicissitude as the awning that shielded the vast assemblages in the Colosseum from wet or heat ought not to be beyond the resources of twentieth century ingenuity. In these days of rapidly developing hygiene, public and personal, some innovation on the traditions of school life is both demanded and expected—innovation directed to the physical well-being of the growing boy or girl during 'lesson-time,' while making the lesson itself more attractive, interesting, and impressive than has hitherto been attainable under the system of learning by rote from the printed page. The 'Roman Hippocrates' (as Celsus used to be called by the medical humanist) simply concurred in traditional Roman usage when he pointed out the salutary effect of using the voice under health-giving conditions, as practised in the 'porticoed halls' of the Rome of his day, with the 'clara lectio' and the free inflation of the lungs assisted by appropriate gesture and attitude. The practice, too, of expressing oneself in words, as encouraged by calling on the pupil to 'give an account' of this or that object *en évidence*, or subject of private reading, and as illustrated in the Roman methods above described, has also its appeal to the contemporary educationist even in the British Isles, and adds another to the profitable hints that may be gathered from a visit to the Eternal City, now celebrating the fiftieth anniversary of its recovered freedom and proving its title to the sympathy and support of the Present by its wise and opportune resuscitation of some of the best features or methods of the Past."

CEREBRAL EPENDYMITIS.

IT is a curious fact that while the pathology of the outer membranes of the brain occupies an important place in all the classical text-books, that of the lining membrane, or ependyma, has been almost entirely ignored. Yet the walls of the cerebral cavities may be the seat of acute, subacute, or chronic inflammatory processes of great interest and clinical significance. The establishment of internal hydrocephalus as a morbid entity seems to have been made by the Edinburgh school as long ago as 1770, but the notion of ependymitis is quite modern; in fact, to obtain clinical and pathological descriptions of the condition it is necessary, or has hitherto been necessary, to consult the literature under such varying titles as internal or acute hydrocephalus, cerebral pseudo-tumour, ventricular meningitis, serous meningitis, hydrocephalus from meningitis, cerebral meningeal syndrome without meningitis, &c. It is therefore satisfactory to note the publication of an authoritative "Study of Cerebral Ependymitis," based on material from the Salpêtrière and Bicêtre, by Dr. Pierre Merle of Paris.[1] The student of neuropathology and the clinician alike will find in this *revue d'ensemble* an admirable exposition of the subject, which both from medical and surgical points of view has been too long neglected. The ependymal lining of the cerebral cavities, prolonged into the medulla, may be the seat of various microbial infections, the result being a serous, a sero-purulent, or a purulent ependymitis; the

[1] Etude sur les Ependymites Cérébrales. Par le Docteur Pierre Merle. Thèse de Paris, 1910. Paris: G. Steinheil. Pp. 240.

ventricular effusion may be clear, opaque, hæmorrhagic, and more or less rich in cells and in pathogenic organisms. Histologically, the lesions are confined to the ependymal surface and the layers immediately under it, and consist in desquamation and other degenerations of the epithelium, active vegetations, perivascular infiltration, and hæmorrhages. The choroid plexuses may be involved in the inflammatory process, but they do not appear to play any special rôle. Ependymitis of this sort is comparable to inflammation of any similar cavity, such, for instance, as the pericardium. Cerebral ependymitis may be, and frequently is, associated with generalised meningitis, sometimes only with meningitis of the base; it may occur without any meningitis whatever. Clinically the "ventricular syndrome" consists of the clinical phenomena of acquired hydrocephalus—signs of increased intracranial tension, optic neuritis, *inter alia;* in acute cases the symptoms usually resemble those of meningitis; in more chronic cases they resemble those of cerebral tumour. Ependymitis localised to the fourth ventricle may give rise to bulbar symptoms, tachycardia, respiratory disturbances, polyuria. There can be no doubt that ependymitis is the predominant factor in many differing conditions reported as serous meningitis or hydrocephalus. It is intimately associated with certain forms of encephalitis; in particular, the hæmorrhagic encephalitis of Wernicke is limited to the peri-ependymal grey matter of the pons in a striking way. Tuberculous and syphilitic ependymitis can be distinguished readily enough; the former occurs in the course of tuberculous meningitis, the latter may be congenital or acquired; in the acute cases the syndrome is always one of increased intracranial tension, and is curable, at least in the syphilitic cases, by suitable treatment. Chronic ependymitis, granular or reticular, is very commonly found in the senile brain. Dr. Merle has discovered by experiment that the ependyma can be infected either from the meninges or directly from the general circulation, but in itself it is a poor barrier to the passage of pathogenic agents circulating in the ventricles. The subependymal tissues are always severely affected in an ependymitis. In a great number of cases evacuation of the intraventricular fluid is indicated. Intraventricular injections, too, as for instance of antimeningococcic serum, are often of great value, for the medicament is disseminated rapidly by this means.

THE MEDICAL DEFENCE UNION.

THE annual general meeting of the Medical Defence Union was held at Brighton on May 18th, Mr. Stamford Felce, the President, being in the chair. The President pointed out in his opening address the disadvantages to the medical profession foreshadowed in the National Insurance Bill, and hoped that resistance to the measure would be strenuous and united. We have received a copy of the annual report and statement of accounts of the Union, which show that the society is in a very good financial condition and that the progress made has been steady and consistent. The additions of new members have been persistent. We again point out that no medical man, in whatever department of medicine he may practise, can claim for himself absolute security from attack, however skilfully and conscientiously he carries out his professional duties; but if he be a member of one of the Defence Societies he can be assured that he will be protected with the best weapon and with the greatest possible chance of success. It must be satisfactory to the council of the Medical Defence Union to know that the society stands high in the estimation of the leaders of the Bar, and that it is recognised by such that the cases in which they are desired to appear on behalf of the Union are "clean," and that the medical member can be defended without reservation or misgiving. Another important matter to which attention may be drawn is the opportunity now accorded to members of availing themselves of the additional protection by insuring against damages and costs of the other side. Some two years ago, owing to representations made on behalf of the members, the council inaugurated a system of insurance which members are allowed to avail themselves of at a nominal premium with the Yorkshire Insurance Company, and by which they are indemnified against loss should a case be decided against the Union. We once more heartily congratulate the general secretary of the Union, Dr. A. G. Bateman, on another successful and most useful year of work.

THE PORTRAIT OF A PRIMITIVE MAN.

THE influence of Christianity in the so-called Dark Ages was entirely opposed to anything in the nature of phallic worship. So severe was the pressure put by the early missionaries of Christianity upon their converts that the latter would seem to have utterly abandoned even the traditions of any kind of phallic ritual and to have purged their very dialects of phallic allusions. Thus Freya and her male counterpart Friggo are handed down to us as respectively the goddess and the god of fertility, spring, vegetation, and so forth, whereas in reality they may very well have been the Astarte and Priapus of our Saxon and Scandinavian forefathers. It is curious, therefore, in view of this huge process of elimination, to come across any survival of what once was a prevalent pre-occupation of the mind of early man. Such a survival would seem to exist on the side of a steep down near the ancient township of Cerne Abbas in Dorset, where a huge male figure appears incised in the turf somewhat after the manner of the Long Man of Wilmington and the White Horses in Berkshire and elsewhere. This figure, locally known as "the giant," would seem to date from a hoar antiquity, though its origin is disputed. We are strongly tempted, indeed, to regard the giant as of the neolithic or bronze age. He is certainly pre-Christian in conception and attributes. Thus he is naked, disproportionately long-armed, and yet well-drawn in the manner familiar to students of the drawings on bone found in Aquitaine and elsewhere. He strides briskly along in pursuit of prey or adventure and in his right hand grasps the handle of an enormous club. The *ensemble* of the figure suggests a type not far removed from the simian. The face has been only roughly sketched in, but it leers cheerfully, and the head presents a low type of development and appears to be sunk between the shoulders. The mammæ are strongly marked, and the huge sexual organ, which is conventionally outlined, suggests a phallic origin. It is curious to reflect that anything so gross should have been allowed to remain in full view of the rustic public during the ages, but the mere fact of this survival points to an immense antiquity. Originally an object of veneration, the figure was probably regarded as bringing good luck during the Celtic and early English epochs. On this account it may have been carefully tended or scoured during the ages of superstition, and it probably continues to be tended now on account of its quaintness and age. Though the figure, which is on the brow of a steep down, one of a series covered with barrows, is necessarily foreshortened, yet the thighs are actually somewhat short, and, with the vigorous-looking legs, have a typically archaic and savage aspect. It is this barbaric drawing of the legs, as well as of the phallus and arms, that seems to prove the great antiquity of the design. We may compare it indeed with the man of the aurochs-hunt, engraved on bone, and discovered by M. Massénat in Laugerie Basse in 1869. This aurochs-hunter is armed with a javelin,

and has a protruding chest. His "belly is well drawn; the sexual parts large and strongly developed; the vertebral column rather long and resembling in its arched form that of the ape when walking upright; the thighs are well drawn, but the femur is very short; the lower part of the leg and the foot are regular and well formed; the head is slightly thrown backwards, and the face has a joyful expression." This description by Elie Massénat is quoted on page 297 of Joly's "Man before Metals," 1887. In Laugerie Basse was found also a figure of "a species of immodest Venus," and one of a pregnant woman. This last, too, belongs to the "reindeer age," which may have been that of the Cerne Abbas giant.

ACUTE PULMONARY ŒDEMA.

IN another place we publish an article by Dr. A. E. Carver on "Acute or Paroxysmal Pulmonary Œdema." The cases he records are interesting, and, as he says, are apparently identical in nature with those described in a recent paper by Dr. Stengel of Philadelphia. In this country a prominent symptom of acute pulmonary œdema has always been considered to be a copious flow of thin, watery expectoration which is frothy from admixture with air. This phenomenon was absent from the cases recorded by Dr. Stengel and also in those now described by Dr. Carver. As the latter writer points out, it is difficult to feel confident that the underlying pathological processes are essentially the same. Acute pulmonary œdema may ensue in death by asphyxia brought about by pneumonia and acute bronchitis, also in acute nephritis and in certain cases of heart failure; it also occasionally occurs after the administration of an anæsthetic. Authorities differ as to the exact manner of its production, many, however, favouring the view that owing to obstruction of the pulmonary circulation, due to cardiac failure or other causes, there is some interference with the proper circulation through the lymph channels, and exudation accordingly ensues. In the cases referred to by Dr. Carver and Dr. Stengel there were obvious signs of temporary heart failure, but although there were indications of a profound degree of congestion of the lungs, the typical symptom of œdema of the lungs, as that condition is generally supposed to manifest itself, was absent. It may be that such difference as exists between these cases and those previously described under the diagnosis of acute pulmonary œdema is, as Dr. Carver remarks, "one merely of degree," but further clinical and pathological experience is necessary before a definite answer can be given.

AIR EMBOLISM DURING OPERATION UNDER AIR-INFLATION URETHROSCOPY.

AT a meeting of the American Urological Association recently held in Chicago Dr. Ernest G. Mark of Kansas reported the following remarkable case, which has been recorded in the *Boston Medical and Surgical Journal*. A man had a small band-like stricture on the floor of the urethra just anterior to the peno-scrotal junction. The stricture was divided under air-inflation urethroscopy, and an emphysematous condition was then seen in its neighbourhood. Almost immediately the patient complained of pains in the epigastrium and began to cough. He became rapidly cyanotic and the pulse became imperceptible. Auscultation over the cardiac area revealed the "whirr" of what was apparently considerable quantities of air passing through the heart. The heart sounds ceased and the respiration gradually stopped. The pupils dilated, the eyes became fixed, the jaw dropped, and the patient apparently died. But under artificial respiration and the hypodermic injection of whisky he was resuscitated and slowly recovered consciousness. For about a week he complained of a feeling of depression in the epigastrium. The local emphysema was not marked and seemed to involve only the cellular tissue of the pendulous urethra. There was no emphysema of the scrotal tissues. On the following day the patient complained of tenderness in the hypogastrium, especially on the left side. On examination extensive emphysema of the abdominal wall was found. This slowly disappeared in about a week. The amount of air which was forced into the circulation without producing a fatal issue is astonishing. Mr. Hurry Fenwick has stated that in air-inflation urethroscopy of a stricture, complicated by a recent false passage, he has observed the occurrence of an emphysematous condition.

THE NATIONAL INSURANCE BILL.

WE epitomise below the action that is being taken and the opinions that have been expressed by bodies qualified in various respects to speak for the medical profession.

The General Medical Council.

Sir Donald MacAlister, President of the General Medical Council, in his opening address to the Council in session on Tuesday said that—"This far-reaching measure touches at so many points the conditions of professional efficiency in this country that it is difficult without close and prolonged study to estimate its effects, immediate and remote, on ordinary medical practice, on clinical hospitals, on public health administration, and on professional education. The Chancellor has admitted this difficulty, and has intimated his willingness to consider such suggestions and criticisms as he may receive from the medical profession of this country. From the nature of its statutory functions the General Medical Council is necessarily concerned with certain aspects of each of the questions I have indicated; and in virtue of its statutory constitution it includes representatives of all departments of medical practice, and of all registered practitioners, incorporate or unincorporate, within the United Kingdom. I suggest, therefore, that it will be proper for the Council to respond to the Chancellor's invitation, and to offer him advice and assistance in relation to matters within its province which appear to be involved in the proposals of the Bill.

We are extremely glad to learn that the General Medical Council has appointed an active committee which will be prepared to advise the Council upon professional lines. We are certain that it will be a great source of satisfaction to the medical profession to know that the General Medical Council has realised how vital are the professional interests at stake. The committee is already meeting, so that it will be able to report to the Council before the end of the session.

The British Medical Association.

For 12 months the Association has been considering the various ways in which this subject might be dealt with, and in March last issued to the divisions a report including questions on all the points which might be raised in any insurance scheme. The divisions have been urged to hold meetings to discuss the report and invite non-members of the Association. This has been done, and the meetings are reported to have been more largely attended and more enthusiastic than any of which we have record. The Medical Secretary and the Deputy Medical Secretary have attended many of these meetings. As a result of the answers of the divisions to the questions contained in the report, the Association has been able to form a general idea of what the profession wishes, and their views have been laid before Mr. Lloyd George and several other Members of the Government. The Chancellor of the Exchequer is receiving another deputation from the Association next week. A large number of Members of Parliament have been interviewed and some of them are in constant communication with the central office of the Association. The feelings of the profession have been laid before committees of both Liberal and Unionist parties, and several Members have undertaken to raise the points put to them in the second reading of the Bill.

A special representative meeting is being held on May 31st and June 1st finally to lay down the policy of the Association and on this policy a plan of campaign will be formed. The plan of campaign will in all probability include a canvass of every member of the profession in the United Kingdom, in order to secure that members will not undertake any individual contract under the Bill, but will insist upon such terms as are approved of by the local profession, the local profession in its turn to take the policy laid down by the representative meeting for its guidance.

The Poor-law Medical Officers' Association of England and Wales.

At a meeting of the council of this association on May 17th the National Insurance Bill came under consideration. The honorary secretary said that the injury likely to be done thereby to the whole profession reduced to insignificance any special injury to their service. He might add that as far as he could discover after a careful search through the Bill there were only two direct references to the Poor-law service: 1. It is provided that boards of guardians in giving relief to applicants insured under this Act are not to take into account any sickness allowance not exceeding 5s. a week. So that in such cases Poor-law medical officers may be required to afford medical services to those who are entitled to State medical attendance. 2. In Ireland it would

seem that the doctors who are to work the Government scheme are essentially the Poor-law Medical Service of that country.

Medical Defence Union.

At the annual general meeting of the above society on May 18th, the chairman, in opening the proceedings, gave an address upon the disabilities of the profession in relation to the proposed scheme of national sickness insurance. The disadvantages of the suggested legislation and its interference with the existing general practice were dealt with fully, and a hope was expressed that strenuous and united resistance would be made to the scheme by the profession.

The Medico-Legal Society.

At a meeting of the Medico-Legal Society held at the society's rooms, 11, Chandos-street, W., on May 23rd, Sir John Tweedy presiding, Mr. J. Smith Whitaker, medical secretary to the British Medical Association, gave an address setting forth very clearly the medical objections to the National Insurance Bill

Mr. SMITH WHITAKER traced through the reports of Royal Commissions, &c., evidences of a growing feeling in recent years that some better provision was necessary for dealing with sickness amongst a very large proportion of the population so that the vicious circle of disease and destitution might be broken. It was very important that the medical profession should realise that the essence of the present Bill, which was based, of course, on German models, was that the working man should be assigned as important a part as possible in the administration, through societies of which he was a member. The clauses dealing with the employment of medical men were very indefinite and apparently left the door open for any system that could be conceived. Methods might be adopted—such as the employment by societies in combination of doctors at fixed salaries—which would have the effect of exploiting the doctor and making a profit out of his services. The objections of the medical profession to the scheme were several. In the first place, an objection was entertained by a large number which applied to the scheme as a whole or any modification of it—namely, public intervention between doctor and patient. This interference, however, was recognised as inevitable if the necessary public objects of the Bill were to be secured, but doctors said, "Let there be no more interference than is absolutely necessary." One of the objections to the scheme was that it did carry intervention far beyond what they believed to be needful. Many would be included as employed contributories who were perfectly well able to provide out of their own resources the cost of the medical benefits allowed under the Bill. The working man earning 35*s.* to £2 a week could, and did, employ a doctor to attend him privately. The necessity for providing medical benefits for voluntary contributors whose incomes exceeded £160 was certainly not demonstrated. The Bill gave them what they did not need—ordinary medical attendance; but did not give them what they did need—viz., institutional treatment. The scheme, it was feared, would tend to the employment of selected doctors; the private practitioner would find a considerable proportion of his patients practically compelled to transfer themselves to doctors officially employed. There was also unwillingness to trust the administration of the scheme to the friendly societies, which had shown themselves in the past shortsighted in the way they had employed their doctors. Medical men wanted a wage limit for medical benefits, free choice of doctor by patient—the gain being that patients would have more confidence in the doctor, and the danger would be avoided of dividing the profession into two factions. Seeing that it was practically agreed by Mr. Lloyd George that the friendly societies were not to appoint the doctor, fix his payment or his patients, and that the terms of employment were to be subject to the Insurance Commissioners, what was there left for the approved societies to administer? It would be better to place the whole responsibility in the hands of the local health committees which already had to deal with institutional treatment, and where home treatment ended and institutional treatment began it would be difficult to say. He believed the medical profession would secure adequate representation on central and local administrative organisations; they wanted also the power to elect in every district a medical committee which should play a recognised part in the administration of the service. The question of payment could not be discussed definitely because the duties were undefined, but the work could not be adequately paid for by any sum in sight at present. In conclusion, Mr. Smith Whitaker spoke of the magnitude of this experiment, and said the profession would recognise that it owed a service to the public, whose interests must be the first consideration. But in return they were entitled to ask the public to bear in mind that it was in the public interest that doctors should be satisfactorily treated.

In the course of a discussion some interesting points were raised.

Dr. MORISON remarked that if doctors were to serve anyone in the way proposed in the Bill it must be the State and not middlemen. Then they would have some prospect of an intelligent directorate, which could not be expected from the majority of friendly societies.

Dr. MAJOR GREENWOOD predicted that unless a wage limit was granted the medical profession had a serious time ahead. Already the sale of practices had absolutely gone—no one could sell or transfer one.

Dr. TIBARD claimed that the Bill would do much to raise the status of the profession by establishing, as it did, the principle that advice should be paid for, and that advice and medicine were two different things. It was a great step in advance in the education of the public.

Dr. LAURISTON SHAW urged that it should be made clear to the public what the terms were on which individual doctors had been willing to accept capitation grants from friendly societies. There was a danger that the charity of doctors in the past would be their ruin in the future. The reason doctors accepted 4*s.* a head was that years ago it was a point of charitable honour to do what they could for struggling institutions just started to help the working man. Doctors would have treated a great many of these cases for nothing in the ordinary way, and when working men tried to help themselves by their societies the medical profession lent a hand and accepted a nominal capitation fee. Now they were told because they had treated these people for next to nothing they should be willing to treat the whole community for a few pounds more. The profession should join in absolutely refusing to do any work under the scheme unless properly paid, not from any sordid motive, but because they were trustees of the profession. It was their duty to see that the profession was properly remunerated, so that an adequate number of men might be secured to it in the future.

THE REAL VALUE OF CONTRACT PRACTICE.

BY TWO PRACTITIONERS.

WE have prepared a few statistics illustrating the club work done in a mixed practice in London which may be of use in the present critical juncture in the history of our profession, and from these a fair estimate may be made of our position as a profession in the future.

In the first place it is clear that the friendly societies benefit largely at the expense of the more wealthy patients of a practice—where, as here, they are treated just like any other patients—no account being taken in their drugs or dressings of the fact that they are contract patients. The figures show clearly that they are getting for £318 a year what the other patients pay £636 for, and, further, that the contract payments, should they be applied to the whole practice, would show a salary divisible among two partners of £249—£124 10*s.* each, or much less than one-half a taxi-driver's earnings.

The figures taken are consultations—no account having been taken of visits—but on investigation we find roughly that 1 in 4 were domiciliary visits, and taking Group J., four times 7*d.* 9·10ths, or say 8*d.* for convenience = 2*s.* 8*d.*; take 2*s.* away for the visit and this will leave 8*d.* for three consultations at the surgery, or if 1*s.* 6*d.* is taken as a fee for the visits it will leave 1*s.* 2*d.*, or 4¾*d.* each consultation other than visits. Again, take the average of the Oddfellows at 4*s.*, and we get 3*s.* 6*d.* for three visits at the surgery and one at home, and taking 2*s.* for the visit, it will show 6*d.* each other consultation.

Seeing 65 people a day we find hard work for two men, the distance limit for visits being mostly three miles—in a few cases two miles; taken at the above rates the Oddfellows will show payments of £1 12*s.* for 16 visits and £1 4*s.* 6*d.* for surgery consultations—total £2 16*s.* 6*d.* per day, or £1 8*s* 3*d.* each partner, *plus* 6*s.* 7*d.* each for Sundays. Total £456 12*s.* 6*d.* per annum each partner in place of the present return of £1412 gross.

We have endeavoured to take the average payment as received at present from friendly societies where the members are selected.

Careful estimate has been made of the likely effect of the Bill if passed in its present form (4*s.* for the doctor as foreshadowed in Clause 38). We find about 2·9ths will still remain, being work practically outside the limit of the Bill; one-ninth are now clubs, and if the 6*s.* rate is reduced to 4*s.* we shall lose £50 a year on this section; the remaining 6·9ths = £1882, will be reduced at once to one-half, namely, £941; thus the loss will be £991 per annum. Against this there will be a saving of about £100 a year on drugs, &c., showing a net loss of £891, or £445 each partner. About one-fourth of this loss may be recovered if the work is taken back as contract work.

Now as to the balance-sheet of work we find, as the Bill now stands, the following are an additional burden. 1. Diseases owing to the patient's own fault—this is now a fair source of income and will be completely wiped away. 2. All the chronic cases—the refuse of the friendly societies will come in for free medical benefit almost at once. 3. Loss of all fees for attendance on workmen injured by accident.

On the other side we are promised relief from some attendance on tuberculous cases, and this we fear is a delusion and a snare, as Clause 15 (3) clearly indicates that only cases likely to benefit will be so treated—what a farce to be sure. The old chronic cases—the tubercle carriers, if we may so call them, will be with us still—and do not a great number of the other cases get away for treatment now? Most assuredly they do.

If this Bill passes, as it promises to do, it will be the greatest blow any profession has received in history; it will mean ruin to thousands of the hardest worked class in the kingdom, and, as far as it is possible to see, the Chancellor

will pass it with the support of both sides of the House, and scant courtesy is being shown to the views of the profession and the men doing the work. The constitution of the proposed health committees is a scandal on the face of it, and we shall be at the mercy of the leading lights of the friendly societies backed up by Government support. Verily the last state will be worse than the first.

We have endeavoured to show the effect of the Bill on the profession. We will now sketch what we think may be done to avert such a national disaster.

1. A wage limit—possibly £160—should be made a *sine quâ non*. We must refuse absolutely to discuss the matter on any other terms whatever.
2. We should fight hard for a minimum payment being fixed of 8*s*. 6*d*. per member exclusive of drugs, dressings, &c. No less sum will give us a living wage.
3. Proper and full representation on all the governing bodies, from the Insurance Commissioners downwards.
4. Free choice of doctor by the insured person.

This raises the question, How can we best secure these concessions? And we suggest that if the profession is loyal to itself, as we believe it is over this matter to such an

Number of members.	Capitation payment.	Total receipts.	1910—Contract visits and consultations.	Average fee.	
		£ *s*. *d*.			
A 260	6/-	78 0 0	472	3/4	These are special and peculiar to the City of London and only held by less than half a dozen medical men.
B 42	6/-	12 12 0	117	2/2	
C (Staff of a shop) —	—	63 0 0	744	1/8⅔	
D (Oddfellows)... 163	6/-	48 18 0	1216	1/2⅔	—
E 42	4/-	8 9 0			
F 50	4/-	9 19 6			
G 12	3/-	1 17 0			
H (Foresters) ... 41	—	8 5 0	44	3/9	Resignation offered on account of small fees and distance, and withdrawn on assurance that more consideration would be shown. Before this one of the worst.
I 15	—	2 19 0	55	1/-	—
J 214	—	42 15 0	1290	-/7$^{9}/_{10}$	A fair example of the average of the masses of employed contributions—both sexes and under 40 at admission.
K 195	—	38 19 4	746	1/-	All very strictly examined.
L 15	—	3 0 6	48	1/3	All clerks.
		£318 14 4	4732	1/4	

Particulars of Work done in 1910 by A and B.

Total receipts	£2824
,, expenses	£1150
Profits	£1674

Total number of entries in books... 21,070
,, ,, ,, club entries 4,732
Average: 65 each weekday—that is, 30 for each partner—and 15 on Sundays.

Average fee for the whole practice... ... 2*s*. 8*d*. per entry.
,, ,, ,, entries other than clubs 3*s*. 5*d*. ,, ,,
,, ,, ,, Group D, E, F, G, @ 5*s*. 6½*d*. ... ... 1*s*. 2⅔*d*. ,, ,,
,, ,, ,, same @ 4*s*. ... ... 10½*d*. ,, ,,
This is fairly representative of the great friendly societies.
,, ,, ,, Group J. @ 4*s*. ... ... 7$^{9}/_{10}$*d*. ,, ,,
This is fairly representative of what the employed Post Office contributors will be.

Proportion of club work to the whole practice about ... ... 2/9ths.
,, ,, income ,, ,, ,, ... 1/9th.
If all the practice were paid for at club rates the total income would be £1399
And the net income £249
If A, B, and C are taken out, being nowise representative of usual club work, the average for clubs would be 10½*d*. instead of 1*s*. 4*d*.

extent that has never before been known, we can get them, and the best way is—

Firstly.—To show clearly, as our figures do, that our position even then will not be improved, but, if altered at all, worse than it is now.

Secondly.—To make representations to the Chancellor and the Members of Parliament of every division through deputations.

Thirdly.—To ask for no more than fair play and keep in view the good of the nation and the future of the race.

Fourthly.—For every medical man to sign an agreement that all question of payment for contract work shall be settled through a local committee of the medical men or a committee of the British Medical Association.

Fifthly.—If we fail utterly to secure fair terms and the Bill becomes law in its present form we must to a man follow the example of the German profession under similar circumstances and refuse to do any contract work whatever for a time and charge everybody the ordinary fees, thus paralysing the whole working of the Act.

Space prevents us touching on the other great defects of the Act, such as dentistry and the large amount of disease due to defective teeth—not one word being mentioned about it in the Bill. In the long run and as a general rule the public gets full value for its money, and whatever the payment is in this case it will be the same: if it is mean and poor the return will also be poor; if it is anything like fair the public will benefit. Is it too much to say that the welfare of the nation and the future of the race depend largely on the medical profession? Treat it fairly and the return will be enormous; treat it badly and, like all other human beings, the feeling of doctors must eventually be that they should not give handsomely for niggardly pay. We appeal for unity in this matter, for the sake of the welfare of the public and the future of our race, as much as for our own protection from partial, if not complete, ruin.

Our books are in existence and are at the disposal of the British Medical Association and the Chancellor of the Exchequer, or any other duly accredited person who can make good use of them.

THE NATIONAL INSURANCE BILL:

THE GERMAN FIGURES COMPARED WITH THE CHANCELLOR'S ESTIMATES.

(FROM A GERMAN CORRESPONDENT.)

THE Chancellor of the Exchequer's statement that a sum of £4,200,000 will be provided for medical attendance and drugs is of particular interest as it affords an indication of the official estimate of the cost of this branch of the National Insurance scheme, and at last makes a definite criticism of Mr. Lloyd George's promise, translated into practice, possible. In the first place, it is a matter for regret to hear that the system of capitation payment is to be retained; true, it is the easiest and most convenient form of payment from a bureaucratic point of view, as well as the cheapest, but it is a feature that is not in keeping with present-day ideas. Under the *régime* of the voluntary associations it might be defended; the sick clubs were in a position to reject doubtful applicants, so that the members might be considered to enjoy average health, and thus the medical attendant was in a position to gauge the amount of work he would be called upon to perform in the course of a year. In a national system this provision for selection must necessarily be absent; if a man is able to earn a wage he is liable to compulsory insurance; therefore it naturally follows that the greatest claims on the practitioner's services will be made by the physically less resistant members, who will form no insignificant proportion of the total number of insured persons. The influence of these members on the whole system is at present problematic, but will form an important factor, as this category will provide the weakest links in the chain and make the relatively greatest calls upon the financial resources of the scheme, so that unwelcome surprises of a pecuniary nature must be expected in this connexion should a too optimistic view be taken of the cost of working so gigantic a measure of social reform. Under the circumstances, the proposal to offer a fixed, and at that a very low, amount of payment per individual for an unlimited amount of work reflects adversely on the opinion of the value of professional services held by the framers of this measure. It is unbusiness-like and undignified, and the taunt of being "out for fees" hurled at the profession by the members of a body about to appropriate a proportionately higher indemnity for their services is unjustified and can only be based on a lack of knowledge of the actual conditions.

The author of the Bill has admittedly gone to Germany for many of the provisions it embodies, but in one point he might have given due consideration to the experience gained in that country. The capitation system of payment is there universally condemned by the profession, and the payment of 4*s.* per head of the insured represents the average rate of remuneration which has hitherto obtained and been found to be totally inadequate in view of the increasing claims made on the practitioner's services and the altered economic conditions. It is thus evident that the British medical man is expected to begin financially at a level that his German colleague is about to abandon in favour of a more just remuneration. The term medical attendance still awaits definition, for it must be remembered that the German club doctor in receipt of a capitation grant receives special remuneration in cases requiring greater skill, in addition to the payments made to specialists and surgeons.

Here the German statistics afford interesting and instructive reading, and many of the conclusions arrived at in that country are capable of application to the conditions under consideration, and should in any event command the greatest attention. We must not overlook the fact that in many respects the cost of living in Germany, in the broadest meaning of the expression, is lower than in England, and the sick clubs being self-governing have been able to make arrangements with their medical attendants every whit as advantageous as the friendly societies in Great Britain; both appear to be past masters in driving a hard bargain in this direction. It cannot be assumed that the British worker is to be provided with a less effective medical service than the German, and yet in 1909 the average cost of medical attendance per insured person amounted to 5*s.* 9*d.* It is assumed that in Great Britain there will be 14,700,000 persons liable to compulsory insurance against sickness, which would entail an expenditure for medical attendance amounting to £4,226,250, or £1,426,250 in excess of the total it is proposed to provide under this heading. And this result is obtained in accepting a figure recognised to represent the utmost limit of economy, and, in fact, incapable of further maintenance at this low level.

Some idea of the extent to which the medical man's services are in request may be gained from the fact that 40·3 per cent. of the insured in Germany in 1909 received medical attendance coupled with sick pay, i.e., were during a period of their illness incapacitated for work—no statistics are kept of medical attendance granted for minor cases not coupled with loss of working power—and the average duration of each illness amounted to 20·5 days. It is significant to note that since 1885 the expenditure for medical attendance and the duration of each illness have been steadily increasing; in fact, an enormous increase is recorded. The cost of medical attendance has increased enormously, as also for drugs and appliances; in 1885 the average cost per member for the former amounted to 2*s.* 2*d.* and for the latter to 1*s.* 7*d.*; in 1909 the amounts were 5*s.* 9*d.* and 3*s.* 7*d.* respectively. From the latter figure it will be seen that the proposal to allow 2*s.* per insured person for drugs is still considerably below the average expenditure under this heading in Germany.

No better illustration of the calls made upon the sick club doctor in a National Insurance scheme can be given than a study of the experience gained in the actual working in practice of a measure of this kind; and as the conditions are in both countries to a very great extent similar or parallel, the official German statistics for 1909 afford some very interesting data for serious consideration. The following

figures refer particularly to the medical side of the question:—

Insurance against Sickness in Germany in 1909.

Total number of persons insured ... ... (one-fifth of the entire population of the German Empire).	12,519,785
Total cost of medical attendance	£3,516,762
Average cost of medical attendance per member	5s. 9d.
Percentage of cases of illness coupled with incapacity for work	40·3
,, ,, ,, ,, ,, ,, males	42·2
,, ,, ,, ,, ,, ,, females	35·2
Average duration of each illness	20·5 days.
,, ,, ,, males	19·4 ,,
,, ,, ,, females	23·8 ,,
Total number of days of illness for all members	103,368,41
Payments to hospitals	£2,085,325
Average cost per member of hospital treatment	3s. 4d.
Average cost for medical attendance and medicines per member undergoing treatment in a hospital	1s. 1½d.
Total cost of medicines, appliances, &c.	£2,223,509
Average cost of drugs per person insured	3s. 7d.
Total cost per member for medical attendance (at home and in hospital) and for drugs	10s. 5½d

It is estimated that the average cost for purely medical attendance for every day of illness coupled with incapacity for work amounts to 10½*d.*, but the Imperial Statistical Office expressly states that this can only be an approximate figure, as no figures are available with regard to medical services for minor cases; and this calculation excludes a consideration of holidays and Sundays, for which no sick pay is granted; therefore these figures cannot claim to be an expression of the cost of medical services per day of illness on an average.

From the above it is apparent that instead of an allowance of 6*s.* per head, as proposed in Great Britain, to cover cost of payments to doctors and for the supply of drugs, the actual expenditure in Germany amounts to 10*s.* 5½*d.* These figures represent 25 years' practical experience which the British practitioner would do well to fully consider and compare with his own experiences of club practice.

REPORT OF THE SANITARY COMMISSIONER WITH THE GOVERNMENT OF INDIA FOR 1909.

(*Concluded from page 1301.*)

Measures directed against Enteric Fever.

THE diminution in enteric prevalence has been manifest all over India; in 1908 there were 11 stations in which admission-rates of over 30 per 1000 from this cause were recorded; in 1909 not a single station (except the enteric convalescent depôt at Naini Tal) had such a high rate as this, Benares showing the highest prevalence of 28·3 per 1000. Meerut and Lucknow each had 56 cases; Rawal Pindi had only 21 cases, compared with 93 in 1908; and Secunderabad 20 compared with 80. The Sanitary Commissioner relates briefly the history of the measures that have been undertaken within the last few years to bring about this amelioration. As far back as 1905 arrangements had been made for a medical officer to visit the scene of Koch's successful antityphoid campaign in South-West Germany; in that year Captain E. D. W. Greig, I.M.S., was deputed for this purpose and studied Koch's methods on the spot. In 1906 the subject was taken up at the Central Research Institute at Kasauli under the direction of Lieutenant-Colonel (now Sir D.) Semple; and in the same year a standing committee on enteric fever was appointed, presided over by the principal medical officer H.M.'s Forces in India. Four principal administrative measures were recommended: (1) enteric convalescents to be isolated away from other troops at some suitable hill station, and their excreta to be systematically examined to determine when they become free from infectivity; (2) all troops engaged in the handling of food, as cooks, mess servants, men employed in regimental dairies and soda water factories, to be medically examined as to their freedom from typhoid infection—no enteric convalescent to be employed in any such duty; (3) orderlies nursing enteric patients to be inoculated, and not to attend on other patients; and (4) as the employment of soldiers of combatant units for the nursing of typhoid patients is dangerous to their comrades, with whom they mix freely in the intervals between their nursing duties, and as some of these nursing orderlies had been found to be typhoid carriers, it was considered that a special corps of male nurses should be constituted as soon as possible. Upon these lines a very effective antityphoid campaign has been carried out. A convalescent depôt for typhoid patients was opened at Naini Tal in April, 1908, from which date until the end of 1909 (the year under review) 655 men were received and treated; 550 underwent bacteriological examinations necessary for the detection of carriers; of these, six were discovered in 1908 and seven in 1909. A second convalescent depôt was opened at Wellington for the Southern Command in June, 1909; here 123 men were dealt with, of whom 64 underwent complete bacteriological examination; one man was found to be an intermittent chronic carrier. At these depôts all convalescents are kept for more than four months; even if no bacillus carrier was detected the removal of the enteric convalescents from their stations, and their segregation where they cannot be a danger to others, would fully justify the establishment of the depôts. Moreover, it is the best treatment for the men themselves and materially diminishes the cost of invaliding to England. The second and third recommendations, as to thorough examination of all men who are concerned in the handling of food for troops and the employment of special orderlies for enteric patients, are being fully carried out. The recommendation as to formation of a special corps of nurses has not yet been adopted, as the teaching now given to the nursing orderlies and the stringent rules as to disinfection are considered to have minimised the danger referred to.

Antityphoid Inoculation.

Two further preventive measures have been undertaken. Instead of waiting until the patients feel ill enough to go to hospital, frequent inspections have been held with a view to finding out enteric cases in an early stage of their illness. When such a case has been found a special investigation of contacts has been made to ascertain by bacteriological examination the existence of any ambulant case or person excreting bacilli without manifesting symptoms. The other preventive measure has been antityphoid inoculation. During 1909 this has been extended in a most satisfactory manner, and the measure may be considered to have become a popular one. A census was taken on Sept. 30th, 1910, the results of which are included in this report. 70,493 men were enumerated. Of these, 46,448 had been "properly" inoculated—i.e., with two or more doses of vaccine; 55,368 had been inoculated with one or more doses; of these 1002 had subsequently been attacked with enteric fever. There were 12,704 uninoculated men who had not suffered, and 1771 who had suffered, from enteric fever. It is stated that this census was not strictly accurate, and that on Dec. 31st, 1910, another one was to be taken with further precautions as to accuracy. With regard to the evidence in favour of inoculation it is stated that, without exception, the medical officers concerned are convinced of the great value of the practice; direct information is available as to the comparative severity of the disease in 170 inoculated and 455 uninoculated patients; in the former the "mean duration of fever" worked out at 23·01 days, and in the latter at 23·75 days. This appears to show no decrease in severity consequent on previous inoculation; but the Sanitary Commissioner states that "it is clear that in some instances medical officers have recorded the number of days in hospital, instead of the number of days of fever, and that this has been done a little more frequently for inoculated than for uninoculated cases." We are told, however, that when interpreted the statistics show that for inoculated cases the "mode" or most likely duration of fever is 15 to 16 days, while for uninoculated cases it is 21 to 22 days; that hæmorrhage and perforation are considerably less frequent; and that the case mortality was 9·5 per cent. in inoculated, compared with nearly 20 per cent. in uninoculated cases. Lastly, it is pointed out that in 1909 for the first time in the history of enteric fever in India the admission-rate for women (10·2 per 1000) was higher than that for men (8·9). Apparently none of the 40 women attacked had been inoculated, and it is believed that the operation is not carried out amongst them; this may be a coincidence, but if it recurs "it will be difficult to find a sufficient reason for it, except

the reason that inoculation is carried out among the men, but not among the women."

General Sanitary Precautions—Bacteriological Work.

As to the general sanitary precautions, it is scarcely necessary to say that they have not been neglected; the Sanitary Commissioner thinks it "desirable rather to point out that in some stations there is still a tendency to concentrate attention and energy upon precautions that may or may not be of service, to the neglect of some of the measures that have been proved by bacteriological investigation to be those that aim at the root of the problem." The swing of the pendulum is at present strongly towards what may be called "particular" methods, or "personal" methods, of prevention; it is to be hoped that "general" sanitation will not be neglected. There is always danger lest enthusiasm in one direction will lead to want of interest, if not actual neglect, in another. It is to be hoped, and to be expected, that this will not be the case in India, where purity of water-supplies and care as to removal and treatment of excreta are as much necessities for health now as ever they were.

The bacteriological and laboratory work carried on has been very considerable. Blood examinations for detection of contact cases were carried out in many thousands of cases; in those done in the divisional laboratories (forming only a small proportion of the whole) a positive result was obtained in 702 instances out of 2456, about 28 per cent.; by means of this test several mild and obscure cases were detected at Murree. In 51 out of 493 examinations of fæces, typhoid or typhoid-like bacilli were detected, B. typhosus being isolated in 39, B. paratyphosus A in 10, and B. paratyphosus B in 2. A positive result was obtained in only 12 out of 195 examinations of urine. Examination of excreta is of little value for diagnosis compared with blood culture or the Widal test, but it is the only means of discovering bacillus carriers. At Naini Tal the urine and fæces of each man were examined 12 times; seven chronic carriers were discovered during the year. The Drigalski-Conradi medium is the one generally in use.

Other Diseases.

With regard to other diseases, five cases of plague occurred; four of these were at Mhow, at the end of an epidemic in the Sadar bazar, when the rats migrated therefrom into the cantonment. Tubercle shows a marked reduction; there were 81 cases and 9 deaths; in 1905 there were 148 admissions and 20 deaths; and in the quinquennium, 1900–04, the yearly admissions averaged 212 and the deaths 28. No explanation is given for this marked decrease. Dysentery caused 801 admissions and 18 deaths, being in the ratios of 11·2 and 0·25 per 1000. This disease has diminished in frequency and in fatality during recent years, but not to so great an extent as hepatic abscess, the admissions for which have declined from 183 in 1906 to 100 in 1909, and the deaths from 107 to 34. This improvement is coincident with a steady decline in the admissions for alcoholism, which have fallen from an average of 231 in 1900–04 to 65 in the year reported on.

Health of the Native Army.

The average strength of native troops in 1909 was 131,627; the admissions to hospital were 584·2, the number constantly sick 20·8, deaths 5·62, and invalids 5·74 per 1000. If the deaths of men on furlough be included the death-rate is 6·42 per 1000. All these ratios are lower than those of the previous year and of the preceding quinquennium. It is pointed out that a comparison, as regards everything except the death-rate, cannot fairly be made between the figures for the British and those for the native troops, because the out-patient system is more largely in use for the latter; they go on furlough in large numbers during some months of the year, and when suffering from chronic disease go on sick leave to their homes. The lower admission ratio was mostly due to diminished prevalence of malaria.

The chief causes of sickness were malaria (179·8 admissions per 1000), dysentery (31·8), uncertain pyrexia (22·2), respiratory diseases (21·4), and venereal (16·4). The most fatal diseases were pneumonia (1·88 deaths per 1000), enteric fever (0·43), and tubercle of the lung (0·39). It is said, however, that many cases diagnosed as dysentery in the native army would be returned as diarrhœa in European troops, and many malarial cases as cases of uncertain pyrexia. As with British troops, the Northern army shows a much higher admission-rate (666·2) and somewhat higher death-rate (6·72) than the Southern (544·6 and 5·27 respectively); this was due to greater prevalence of malaria, enteric fever, and pneumonia. The highest constantly sick rates were in Assam (32·3) and the Western Coast area (31·3); the lowest were in the Deccan (17·8) and Southern India (18). Of the principal diseases, malaria was most prevalent in the North-Western Frontier, Indus Valley, and Rajputana area, where it caused 419 per 1000 admissions, and in Assam (390). At Dera Ismail Khan the ratio was 721·8, and at Edwardesabad 714; the small post of Jandola (with a strength of 161) had as many as 1472 per 1000 admissions from this cause. Only 26 cases of cholera occurred during the year. There was no epidemic prevalence amongst the troops. Small-pox caused only 43 admissions and 8 deaths; there was no epidemic. Of enteric fever 284 cases were diagnosed, with 57 deaths. At Baroda there were 17 cases in the 94th Infantry, and in the Gurkhas at Dehra Dun there were 35 cases. Venereal diseases showed a slight increase, the ratio of admissions being 16·4, a higher figure than in the preceding three years. Malta fever caused only 13 admissions, 7 being at Dera Ismail Khan. The native army enjoyed almost complete immunity from plague, although there was some increase among the general population; only 16 cases occurred altogether, with 4 deaths.

Scurvy is at present a disease of little consequence among the troops; every now and then this impunity leads to want of care, and we are reminded that cause and effect stand in the same relation to each other as in past years. The total number of admissions was 132, giving a ratio of 1·4 per 1000. 20 cases occurred at Robat, a small post in Baluchistan, in a detachment of the 12lst Pioneers, numbering 104. The medical officer reported that fresh vegetables were sent from Quetta, but that the supply was insufficient, and that most of the men who had been on duty at Robat suffered from spongy gums and other signs of slight scurvy. This appears to point to some want of care, as already suggested. On referring to the report for 1908 we find that at the same post 16 cases had occurred in that year. Fresh vegetables in that year also could not be obtained at the station, and the supply sent from Quetta was insufficient. This appears to be a case where in two successive years there has been neglect of the preventive measures that are perfectly well known to be necessary. An explanation might well be called for.

Pneumonia was the cause of one-third of all the deaths in the native army—viz., 248, giving a ratio of 1·88 out of a total death-rate of 5·62 per 1000. It was less prevalent than in 1908, and did not occur anywhere in epidemic form. Venereal diseases are decreasing amongst the native troops, though not so rapidly as in the European army. In 1909 there was a slight increase over the figures of the previous three years, the admissions being 16·4 per 1000; this increase, as compared with 1908, was confined to the Northern army, and was most marked among the Gurkhas.

Indian Jails.

The mean jail population in India, Burma, and the Andamans in 1909 amounted to 112,249, being some 3,000 less than in the previous year; the mean death-rate was 25·02 per 1000, being 0·55 higher than in 1908. The principal causes of sickness were malaria (172·4 per 1000), dysentery (70·2), abscess, ulcer, and boils (66·1), diarrhœa (38·6), and respiratory diseases (23·3). The chief causes of death were dysentery (4·20), tubercle of lungs (3·72), and pneumonia (3·60). The malarial cases were less numerous than in 1908. The disease was most prevalent in the North-Western Frontier Province (504·4 admissions per 1000). The death-rate rose from 1·04 in 1908 to 1·19 in 1909. In Eastern Bengal and Assam it was as high as 2·79 per 1000. Dysentery was also less prevalent than in the previous year, although in Madras, Burma, and the North-Western Frontier the admissions were more numerous. In Eastern Bengal and Assam both admission- (200·2) and death-rates (8·09) were very high. Tubercle of the lungs was on the whole about the average (9·9 per 1000 admissions, 3·72 deaths); but in the Punjab both the admission- (15·4) and death-rate (5·47) were abnormally high.

General Population.

The total population of British India is given as 226,394,326, among whom a birth-rate was registered of

36·65 and a death-rate of 30·91 per 1000. In all provinces the birth-rate was higher than the death-rate except in the United Provinces, where the latter exceeded the former by 4·02, and in the small districts of Ajmer-Merwara and Coorg. The general death-rate was 7·30 per 1000 below that of 1908 and 4·88 below the mean of the previous five years. Cholera, small-pox, fevers, and dysentery were less fatal than in 1908, but plague was more fatal. From cholera the death-rate was 1·05 per 1000, less than half the mortality in 1908, all provinces but three sharing in the decrease. In Bengal the death-rate (1·12) was the lowest since 1880; in Eastern Bengal and Assam, however, the ratio was 2·40; in Bombay, 1·55; and in Upper Burma, 2·46. Small-pox (0·45) and dysentery and diarrhœa (0·96) were less fatal than in any of the preceding five years. In Bengal, however, there has been an increase in small-pox mortality in each year since 1906, the ratio now being 0·76 per 1000. Calcutta itself suffered from an epidemic in the cold weather, and had the high death-rate of 4·46; this is just ten times the rate for the country as a whole. There was a slight increase in plague, but although the deaths numbered 178,808 altogether, this was a lower mortality than in any year (except 1908) since 1900. The mean death-rate was 0·64 per 1000. Eastern Bengal and Assam were free from plague, also the North-Western Frontier Province. In Bengal and Bombay and Lower Burma there was less than in 1908. In the United Provinces, Punjab, Central Provinces, Madras, and Upper Burma there was an increase. On account of the decline in the disease in the United Provinces preventive measures were discontinued, but the severe recrudescence in the autumn made it necessary to re-adopt them in many places. The death-rate from "fevers," under which heading in many parts of the country nearly all the recorded deaths are included, was 19·82, a great improvement on the abnormal rate of 23·96 in 1908. The designation is, however, a vague one. At Dinajpur, in Eastern Bengal, an attempt was made to ascertain the causes of 131 deaths reported under this head; only 34 were probably due to malaria; the others included heart disease, rheumatism, diarrhœa, &c. The highest "fever" death-rate was in Eastern Bengal and Assam (24·56); in Madras it was only 7·3 per 100.

Vaccination.

It is stated that there has been a decline in the total number of vaccinations performed, this having occurred in six provinces. Both primary and revaccinations were also rather less successful (94·62 and 66·58 per cent. respectively) than heretofore; but the percentage of "theoretically available" infants vaccinated is reported as 44·20, being an advance on the previous year's ratio.

Sanitary Work.

In the account of sanitary works it is stated that an additional water-supply is to be provided for Darjiling in connexion with the sewerage scheme for that station; that piped water-supplies are also being extended at Agra, Lucknow, and Cawnpore; new wells and a reservoir have been completed at Lahore; and at Delhi a valuable improvement was effected in the waterworks by connecting the wells with the suction at the intake, so that clear water may be drawn from the wells when the Jumna is in flood. New waterworks have been commenced for Madras, and plans and estimates completed for a new drainage scheme. In Guzerat it is noted that by means of an electrical apparatus an underground stream of water was successfully traced, and it is hoped that this will lead to the location of sources of water-supply in the trap formation.

Research Work.

In the concluding section reference is made to a research now in progress by Captain W. S. Patton, I.M.S., as to the causation of kala-azar; this officer is working at Cambay in the Bombay Presidency, and after experimenting on various possible transmitters of the parasite, found all to be negative except bed bugs. Many observations were made on bugs fed with the blood of infected patients during June, July, and August; but no development of the parasite could be obtained. Captain Patton then, considering that in Cambay 95 per cent. of the patients become infected during the cold season, imitated these conditions by keeping the fed bugs in tubes surrounded with ice. After 14 days in the stomach of one of these bugs long flagellates were found actively motile and dividing. The research is still in progress. Captain E. D. W. Greig, I.M.S., has investigated the prevalence of "epidemic dropsy or beriberi" in Calcutta, and so far has come to the conclusion that the disease is the result of a diet deficient in phosphorus, such as one consisting of rice or wheat from which the outer phosphorus-containing layers have been removed. Prevention would be effected by using "unpolished" food grains, or by adding the "polishings," or by substituting for part of the steam-milled grain a sufficient quantity of other grain rich in phosphorus, or of fresh meat.

POOR-LAW MEDICAL OFFICERS' ASSOCIATION OF ENGLAND AND WALES.

A MEETING of the council of this association took place at 34, Copthall-avenue, London Wall, E.C., on May 17th, Mr. D. B. Balding being in the chair.

The honorary secretary reported that with regard to the dispute between the Shoreditch guardians and their district medical officers matters were at a standstill. The Local Government Board had done nothing further, and there had been no fresh developments since the last council meeting.

The delegates of the association reported what had been done at the conjoint conference of Poor-law officers at Norfolk House, the final meeting of which had recently taken place. Most of the medical recommendations of their association had been adopted by that conference, but there had been some important modifications at the final meeting, when the report of the whole conference was drawn up.

The delegates appointed to attend the recent conference of part-time medical officers also made their report and informed the council that it had been arranged to form a conjoint committee of representatives from all associations of part-time medical officers to look after their common interests, and that the following associations were to be represented: The Poor-law Medical Officers' Association, the Public Vaccinators' Association, the Association of Postal Medical Officers, the Association of Factory Surgeons, the Police Surgeons' Association, and the Medical Officers of Health Association. The council elected Mr. A. Withers Green, Mr. T. Lloyd Brown, and Dr. Major Greenwood as its representatives.

The honorary secretary reported that at the request of the secretary of the Public Vaccinators' Association he had forwarded the opinion given by Sir Robert Reid on the question whether public vaccinators could be considered "officers" under the provisions of the Poor-law Officers' Superannuation Act. It would appear that that association was again investigating the question.

It was decided that the annual meeting of the association should be held on Thursday, July 6th, in the Council Chamber of the British Medical Association at 3 P.M. There would be no dinner this year, but tea would be provided for those attending the meeting.

The honorary secretary reported the publication of the first number of the journal of the association, *The Poor-law Medical Officer*, and the council unanimously congratulated the editor on the useful character of the first number, and thought that it would greatly assist the work of the association.

A letter was read from Mr. George Jackson thanking the association for its assistance in his candidature for a seat on the General Medical Council, and stating that he was doing his best to promote a meeting of the association in Plymouth in 1912.

The National Insurance Bill came under consideration. The honorary secretary said that the injury likely to be done thereby to the whole profession reduced to insignificance any special injury to their service. He might add that as far as he could discover, after a careful search through the Bill, there were only two direct references to the Poor-law Service:—1. It is provided that boards of guardians in giving relief to applicants insured under the Acts are not to take into account any sickness allowance not exceeding 5s. a week. So that in such cases Poor-law medical officers may be required to afford medical services to those who are entitled to State medical attendance. 2. In Ireland it would seem that the doctors who are to work the Government scheme are essentially the Poor-law Medical Service of that country.

SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE.

MEETING OF PERMANENT COMMISSION.

THE first meeting of the Permanent Commission of the International Congresses of Medicine took place in London on April 21st, at the Royal College of Physicians, under the presidency of Dr. F. W. PAVY.

Many applications were dealt with. With regard to that claiming for Canada and Poland the right of appointing delegates to the Permanent Commission it was agreed that the executive committee should accord all honours to the committees from these two countries, but that it would not be possible to depart from the principle of confining representation on the Commission to Sovereign States. With the applications for the admission of Spanish and Esperanto among the official tongues the Commission found itself unable to comply. While recognising the importance of Spanish, it was considered undesirable to add yet another to the official languages already adopted. The same reason held in the case of Esperanto, which, moreover, as yet is not widely enough disseminated to be taken into consideration.

As to the request of the International Dental Federation in favour of admitting to the Congress dentists who do not hold a diploma in medicine it was felt necessary to maintain the general principle that only medical diplomates could be members of the Congress; but attention was called to Article 4*b* of the Congress at Budapest, which is accepted as a general regulation of the International Medical Congresses, and which lays down that *savants* presented by national committees or by the executive committee can become members of the Congress.

The request of the Professional Association of Physicians of Lower Austria asking for the establishment of a section on the professional interests of physicians had to be rejected in view of the purely scientific character of all the congresses hitherto held, a character that it is desirable to maintain.

The general regulations for international congresses of medicine, drawn up by the secretary-general, were adopted with certain modifications. The principal points are:—

1. The uniform composition of national committees in the different countries, on the principle of the representation of the medical organisations of the country. The national committees will have the right to make proposals to the Permanent Commission, and to give advice to the organising committee and to the bureaux of sections on all matters relating to the work of the Congress.

2. The functions of the Permanent Commission on the one hand, and of the committee of organisation on the other, have been precisely determined.

3. On the Permanent Commission is imposed, apart from the direct preparation of the Congress, the task: (*a*) of coming to an agreement with the bureaux of societies and international medical congresses, so as to avoid a conflict of times, places, and subjects; (*b*) of furthering the study of medical questions demanding international coöperation and of instituting commissions charged with preparing or elaborating them.

4. An arrangement has been come to whereby international congresses of special medicine may establish their permanent headquarters at the Bureau of the Permanent Commission.

5. The honorary presidents of the sections—if they have been nominated—shall take their place in the bureau, but shall not actually (*effectivement*) preside.

As to the redivision of the sections, the following modifications have been made in the list of the sections of the Budapest Congress. The title of the third section will be General Pathology and Pathological Anatomy; the title of the fourth section will be Bacteriology and Immunity; to the surgical (seventh) section are added two subsections, one of Orthopædics and one of General and Local Anæsthesia; the title of the eighteenth section will be Hygiene and Preventive Medicine; the title of the twentieth section will be Military and Maritime Medicine and Hygiene; the title of the twenty-first section will be Tropical Pathology. A new section (twenty-second) of Medical Radiology has been established.

The proposal of the executive committee to fix the date of the Congress of London for August 6th–12th, 1913, was accepted, the following being the officers:—President of the Congress, Sir Thomas Barlow, Bart., K.C.V.O.; secretary-general, Dr. W. P. Herringham, 40, Wimpole-street, London, W.; treasurers, Sir Dyce Duckworth, Bart., and Mr. G. H. Makins, C.B., F.R.C.S.

All communications concerning the organisation of the Congress should be addressed to the Secretary-General of the Permanent Commission, Professor H. Burger, Vondelstraat 1, Amsterdam; or to the Bureau of this Commission, Hugo de Grootstraat 10, La Haye. National committees may address themselves directly to the executive committee in London.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

IN 77 of the largest English towns 8243 births and 4077 deaths were registered during the week ending May 20th. The annual rate of mortality in these towns, calculated on their probably over-estimated population, which had been equal to 13·3 and 13·4 per 1000 in the two preceding weeks, declined to 12·4 in the week under notice, and was lower than in any previous week of this year. During the first seven weeks of the current quarter the annual rate in these towns averaged 14·3 per 1000; and in London during the same period the reported annual rate did not exceed 13·5 per 1000. The annual reported death-rates last week in the 77 large towns ranged from 4·3 in Reading, 4·7 in Burton-on-Trent, 5·5 in Willesden, and 6·2 in Bournemouth, to 18·4 in Stockton-on-Tees, 19·3 in Huddersfield, 19·7 in Wigan, and 19·9 in Swansea. The 4077 deaths from all causes in the 77 towns last week showed a further decrease of 317 from the numbers returned in recent weeks, and included 341 which were referred to the principal epidemic diseases, against numbers declining steadily from 702 to 422 in the ten preceding weeks. Of these 341 deaths, 136 resulted from measles, 96 from whooping-cough, 52 from infantile diarrhœa, 30 from diphtheria, 15 from scarlet fever, and 12 from enteric fever, but not one from small-pox. The mean annual death-rate from these epidemic diseases in the 77 towns did not exceed 1·0 per 1000, and was lower than in any previous week of this year. The fatal cases of measles in the 77 towns, which had steadily declined in the ten preceding weeks from 474 to 173, further fell last week to 136; the highest annual death-rates from this disease recorded in these towns last week were 1·5 in Bristol, 1·6 in Manchester, 1·7 in Wigan, and 4·8 in Stockton-on-Tees. The deaths from whooping-cough, which had ranged between 134 and 100 in the four previous weeks, declined last week to 96; they caused an annual rate of 1·4 in Warrington, and 1·1 in Wigan. The 52 deaths of children under two years of age attributed to diarrhœa showed a further slight decline from recent weekly numbers. The deaths referred to diphtheria, which had been 33 and 45 in the two previous weeks, declined last week to 30; they included 10 in London and its suburban districts, and 2 each in Liverpool, Leeds, Sheffield, Salford, Stoke-on-Trent, and Blackburn. The fatal cases of scarlet fever declined to 15 last week, from 22 and 21 in the two previous weeks; 4 occurred in Liverpool and 3 in Birmingham. The 12 deaths referred to enteric fever corresponded with the number in the previous week, and included 2 in Stoke-on-Trent. The number of scarlet fever patients under treatment in the metropolitan asylums and the London Fever Hospital, which had increased from 982 to 1070 in the five preceding weeks, had further increased to 1082 at the end of last week; 157 new cases of this disease were admitted to these hospitals during last week, against 142 and 167 in the two preceding weeks. These hospitals also contained 798 cases diphtheria, 647 of measles, 305 of whooping-cough, 26 of enteric fever, and 11 of small-pox on Saturday last. The 1026 deaths from all causes in London last week (a lower number than in any previous week of this year) included 173 which were referred to diseases of the respiratory system, against 268, 227, and 232 in the three preceding weeks; only 4 deaths were directly referred to influenza last week, against 16 and 7 in the two previous weeks. The deaths attributed to different forms of violence in the 77 towns, which had been 136 and 170 in the two preceding weeks, further increased

to 184 last week. The causes of 28, or 0·7 per cent., of the deaths registered in the 77 towns during last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Manchester, Leeds, Sheffield, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Salford, and in 51 other smaller towns; the 28 uncertified causes of death in the 77 towns last week included 7 in Liverpool, 3 in Gateshead, and 2 both in Birmingham and Leicester.

HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns, having an estimated population of 1,710,299 persons (based on the recent Census enumeration) 983 births and 517 deaths were registered during the week ending May 20th. The annual rate of mortality in these towns, which had been equal to 19·1, 17·3, and 17·0 per 1000 in the three preceding weeks, further declined to 15·8 in the week under notice. During the first seven weeks of the current quarter the annual rate in these towns averaged 18·1 per 1000 of the recently enumerated population. The annual death-rate last week ranged in the eight towns from 5·2 and 12·8 in Leith and Aberdeen to 18·7 in Edinburgh and Greenock, and 19·1 in Paisley. The 517 deaths from all causes in the eight towns last week showed a further decline of 41 from recent weekly numbers, but included 71 which were referred to the principal epidemic diseases, against 67 and 82 in the two previous weeks; of these 71 deaths, 49 resulted from whooping-cough, 11 from diarrhœa, 7 from measles, 2 from scarlet fever, and 1 each from diphtheria and enteric fever, but not one from small-pox. The mean annual rate from these epidemic diseases in the eight towns last week was equal to 2·2 per 1000, and exceeded by 1·2 the mean rate from the same diseases in the 77 English towns. The fatal cases of whooping-cough in the eight towns, which had been 37 and 43 in the two preceding weeks, further rose to 49 last week, and included 31 in Glasgow, 5 in Paisley, 4 in Edinburgh, and 3 each in Dundee, Aberdeen, and Greenock. The 7 deaths from measles showed a decline of 8 from the number in the previous week; 5 were recorded in Glasgow. Of the 2 fatal cases of scarlet fever, fewer by 5 than those in the previous week, 1 occurred in Edinburgh and 1 in Greenock. The 11 deaths attributed to diarrhœa, including 7 of infants under 2 years of age, exceeded by 2 the number in the previous week. The death referred to diphtheria occurred in Edinburgh and the death from enteric fever in Glasgow. The deaths resulting from diseases of the respiratory system in the eight towns, which had steadily declined from 136 to 75 in the four preceding weeks, further fell to 66 in the week under notice, and were 32 below the number in the corresponding week of last year. Of the 517 deaths from all causes in the eight towns, 165, or 32 per cent., were recorded in public institutions, and 18 were attributed to different forms of violence. The causes of 17, or 3·3 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 77 English towns last week the proportion of uncertified causes of death did not exceed 0·7 per cent.

HEALTH OF IRISH TOWNS.

In 22 town districts of Ireland, having an estimated population of 1,163,596 persons, 589 births and 359 deaths were registered during the week ending May 20th. The annual rate of mortality in these towns, which had steadily declined in the four preceding weeks from 22·0 to 17·8 per 1000, further fell to 16·1 in the week under notice. During the first seven weeks of the current quarter the annual death-rate in these towns averaged 19·7 per 1000; the mean rate during the same period in the 77 English towns did not exceed 14·3, and in the eight Scotch towns 18·1 per 1000. The annual death-rate during the week under notice in the 22 Irish towns was equal to 15·5 in Dublin (against 10·9 in London), 16·1 in Belfast, 17·8 in Cork, 15·4 in Londonderry, 26·0 in Limerick, and 11·7 in Waterford; in the 16 smallest of these Irish towns the mean annual death-rate during last week was equal to 15·4 per 1000. The 359 deaths from all causes in the 22 towns during the week showed a further decline of 38 from the decreasing numbers in recent weeks, and included 24 which were referred to the principal epidemic diseases, against 28 and 35 in the two previous weeks; these 24 deaths were equal to an annual rate of 1·1 per 1000, which exceeded by 0·1 the mean rate from the same diseases in the 77 English towns. Of these 24 deaths from the principal epidemic diseases in the Irish towns last week, 9 resulted from whooping-cough, 9 from diarrhœa, 4 from measles, and 1 each from diphtheria and enteric fever, but not one either from scarlet fever or small-pox. The 9 fatal cases of whooping-cough exceeded by 3 the number in the previous week, and included 4 in Dublin, and 2 both in Cork and Londonderry. The 9 deaths attributed to diarrhœa included 8 of infants under 2 years of age; 4 occurred in Belfast and 3 in Dublin. The 4 fatal cases of measles were fewer by 13 than the number in the previous week, and were all recorded in Dublin. The death referred to enteric fever and the fatal case of diphtheria also occurred in Dublin. The deaths in the 22 towns referred to diseases of the respiratory system, which had been 105 and 86 in the two preceding weeks, further declined last week to 74. Of the 359 deaths from all causes, 104, or 29 per cent., were recorded in public institutions. The causes of 11, or 3·1 per cent., of the deaths in the 22 towns last week were not certified either by a registered medical practitioner or by a coroner after inquest; the proportion of uncertified causes of death in the week under notice did not exceed 0·7 per cent. in the 77 largest English towns, and was equal to 3·3 per cent. in the eight principal Scotch towns.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet-Surgeons: A. Kidd to the *Commonwealth*; C. S. Facey to the *Warrior*; E. T. P. Eames to the *Devonshire*; F. A. Capps to the *Boadicea*; A. H. L. Cox to the *Achilles*; and J. Andrews to the *Exmouth*. Staff-Surgeon: W. Jackson to the *Forward*. Surgeons: E. MacEwen to the *Warrior*; W. Miller to the *Achilles*; and F. R. Featherstone and S. W. Grimwade to the *Exmouth*.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Richard P. Bond retires on retired pay (dated May 19th, 1911).

The undermentioned Captains to be Majors (dated May 17th, 1911): Lawrence W. Harrison, Hugh M. Morton, Marcus H. Babington, Horace S. Roch, and Frederic Harvey.

Colonel F. J. Lambkin has taken up duty as Administrative Medical Officer at Cape Town, in succession to Surgeon-General G. W. Robinson, transferred to the Home Establishment. Lieutenant-Colonel F. W. Caton Jones has taken up duty at Quetta as Senior Medical Officer. Lieutenant-Colonel W. Turner, at present stationed at York, has been selected for the higher rate of pay under Article 317 of the Royal Warrant. Lieutenant-Colonel W. E. Berryman, on completion of a tour of service in India, has been appointed to the Aldershot Command for duty. Lieutenant-Colonel Sir J. Fayrer, Bart., has arrived home on leave from Hong-Kong. Lieutenant-Colonel R. G. Hanley has embarked for a tour of service in South Africa. Major H. L. W. Morrington, from Chatham, has taken up duty at Malta. Major H. E. Staddon, from the Curragh Camp, has been appointed to the Eastern Command. Major J. P. Silver has been transferred from the Military Hospital, Glasgow, to Edinburgh. Major F. W. Begbie, surgical specialist at Colchester, has been transferred to Tidworth Park as Assistant to the Administrative Medical Officer for the Royal Army Medical Corps training. Major C. A. Stone has arrived home from India. Major J. C. Jameson, on return from service in Egypt, has been appointed to the Eastern Command for duty. Major H. Ensor, D.S.O., has arrived home on leave from Egypt. Major J. McD. McCarthy has on arrival in India been posted to the Third (Lahore) Division. Major F. Bliss has been appointed a Specialist in Advanced Operative Surgery to the Fourth (Quetta) Division. Major C. H. Whitstone has been granted six months' leave of absence home from India. Major J. Ritchie has taken over duty as Officer Commanding the Station Hospital at Dalhousie. The appointment of Captain W. R. P. Goodwin as Ophthalmic Specialist to the First (Peshawar) Division has been cancelled. The following Captains have been warned by the War Office for service abroad during the coming trooping season:—R. V. Cowey, F. E. Rowan-Robinson, J. S. Bostock, A. H. McN. Mitchell, M. F. Foulds, specialist in advanced operative surgery at Belfast; R. C. Wilson, P. G. Hyde, A. McMunn, A. W.

Sampey, A. J. Williamson, specialist in advanced operative surgery at Woolwich; H. Rogers, H. H. Kiddle, M. G. Winder, F. W. W. Dawson, and J. H. Duguid. Captain C. W. O'Brien, on arrival from India, has been appointed for duty in the Dublin District. Captain T. B. Unwin, from Aldershot, has taken up duty on the West Coast of Africa. Captain R. K. White, from Cawnpore, has been posted to the Aldershot Command. Captain J. F. Grant has been transferred from Benares to Lucknow. Captain S. Field, from Chatham, has joined at Jamaica. Captain E. B. Booth, from Kamptee, has been posted to the Irish Command. Captain C. E. Hardinge has been granted eight months' leave of absence home from India.

INDIAN MEDICAL SERVICE.

The King has approved of the retirement of the undermentioned officers of the Indian Medical Service:—Surgeon-General Henry Hamilton, C.B. (dated April 7th, 1911), Lieutenant-Colonel Croasdaile Miller Thompson (dated April 1st, 1911), and Lieutenant-Colonel William Henry Quicke (dated April 25th, 1911).

Colonel W. A. Quayle has arrived home on leave from India. The services of Lieutenant-Colonel R. B. Roe, Civil Surgeon of Nagpur, have been placed by the administration of the Central Provinces at the disposal of the Government of India. Lieutenant-Colonel A. Coleman, civil surgeon at Multan, has been transferred to Rawalpindi. Lieutenant-Colonel J. T. Daly has been permitted by the Secretary of State for India to extend his leave for six months. Major C. H. Bowle-Evans has taken up duty as Medical Officer of Health at Peshawar. Major P. P. Kilkelly has been granted leave of absence home from India for two years. Major W. H. Kenrick, on special duty in connexion with the Investigation of Malarial Fevers, has been placed under the orders of the Sanitary Commissioner of the Central Provinces. Major F. N. Windsor has been confirmed in his appointments as Chemical Examiner, Bengal Presidency, and Professor of Chemistry at the Calcutta Medical College. Major R. G. Turner, civil surgeon of Gonda, has been granted eight months' leave of absence home from India. Major H. S. Wood, on return from leave, has been appointed Civil Surgeon at Rajshahi, Eastern Bengal. Major J. Penny, Bengal, has received an extension of his leave on medical certificate for six months. Major D. H. Graves has arrived home from India. Captain J. M. A. Macmillan, civil surgeon at Hoshangabad, has been placed on special duty at Pachmarhi under the orders of the Administration of the Central Provinces. Captain W. E. Brierly has been granted leave of absence home from India on medical certificate for six months. Captain D. P Goil, civil surgeon at Rajshahi, Eastern Bengal, has been appointed Civil Surgeon of Mymensingh. Captain L. B. Scott, on return from leave, has taken up duty as Civil Surgeon of Sylhet, Eastern Bengal. Captain A. N. Thomas, Captain A. E. J. Lister, Captain W. E. R. Williams, and Captain L. M. Holmes have arrived home on leave of absence from India. Captain C. Dykes, civil surgeon of Saharanpur, has been placed in charge of the Plague Preventive Measures in the Ghazipur, Azamgarh, and Ballia districts. Captain R. D. Willcocks has been posted to Tinnevelly as District Medical Officer.

TERRITORIAL FORCE.

Royal Army Medical Corps.

Lieutenant-Colonel Charles Averill to be Sanitary Officer of a Territorial Division (dated May 20th, 1911). Major William James Howarth, Sanitary Service, to be appointed Sanitary Officer of a Territorial Division, vice Lieutenant-Colonel Arthur Newsholme, who resigns that appointment, and who is placed on the list of Sanitary Officers whose services will be available on mobilisation, with precedence as from August 22nd, 1908 (dated May 20th, 1911).

1st East Lancashire Field Ambulance, Royal Army Medical Corps: Supernumerary Major William B. Pritchard ceases to serve with No. 18 Field Ambulance, Royal Army Medical Corps, Special Reserve, and is restored to the establishment (dated May 20th, 1911). Major William Leonard Bentley, from the 3rd East Lancashire Field Ambulance, Royal Army Medical Corps, to be Major, dated May 20th, 1911).

2nd East Lancashire Field Ambulance, Royal Army Medical Corps: Major William B. Pritchard, from the 1st East Lancashire Field Ambulance, Royal Army Medical Corps, to be Major (dated May 20th, 1911).

2nd Eastern General Hospital, Royal Army Medical Corps: The undermentioned officers resigns their commissions (dated May 20th, 1911): Lieutenant-Colonel Henry S. Branfoot and Lieutenant-Colonel Thomas J. Verrall.

Attached to Units other than Medical Units.—Lieutenant Thomas J. Faulder to be Captain (dated Jan. 9th, 1911). Captain James P. Brown to be Major (dated April 13th, 1911). The undermentioned officers resign their commissions, and are granted permission to retain their rank and to wear the prescribed uniform (dated May 20th, 1911):—Lieutenant-Colonel and Honorary Surgeon-Colonel William D. Waterhouse. Lieutenant-Colonel Alexander D. Fraser. Captain Robert T. Ferguson (dated May 24th, 1911). The undermentioned officers resign their commissions (dated May 20th, 1911):—Lieutenant William Cockburn and Lieutenant Thomas S. Worboys.

For Attachment to Units other than Medical Units.—Arthur Donald John Bedward Williams to be Lieutenant (dated Feb. 11th, 1911).

Correspondence.

"Audi alteram partem."

THE NATIONAL INSURANCE BILL.

To the Editor of THE LANCET.

SIR,—The representative meeting of the British Medical Association will be held next Wednesday (31st inst.) to determine the policy of the medical profession with reference to this Bill and the questions involved. May we express a hope that they will most carefully consider the interests of the general practitioner.

One of the questions to be decided is, Shall the Association consent to negotiate for a capitation payment for medical benefits to all classes of the community; shall it ask for payment for services rendered and on a tariff of fees; or shall it acquiesce in both plans and ask the Government for local option, it being left to the local doctors to decide by a majority which they prefer?

Hundreds of general practitioners absolutely decline to enter into any contract on a capitation payment, and would certainly oppose such a proposal on behalf of all classes of the community. Local option would be, if capitation is approved of, tyranny exercised over these doctors. No doctor can possibly object to payment for services rendered on a tariff of fees. If we are united we must win.

May we express a hope that every general practitioner will do his best to influence the representative returned from his district to vote in favour of the resolution at foot, which will be brought before the meeting?

We are, Sir, yours faithfully,

E. ROWLAND FOTHERGILL,	E. J. MCCARTHY MORRIS,
HUGH BARBER,	NEWMAN NEILD,
RICHARD BEBB,	R. J. W. OSWALD,
WM. J. NOEL BELL,	A. S. MORTON PALMER,
F. G. BUSHNELL,	GEORGE PARKER,
H. BUTLER,	PHILIP PREBBLE,
H. G. COOPER,	H. VAUGHAN PRICE,
P. R. COOPER,	C. STENNETT REDMOND,
J. STAVELEY DICK,	W. B. SECRETAN,
P. VERNON DODD,	BERTRAM SOPER,
J. W. DRAPER,	WILLIAM SOPER,
D. R. POWELL EVANS,	JOHN SPEARS,
CHARLES J. EVERS,	ROBERT SPEARS,
W. J. S. EWAN,	R. STURGIS-WHITE,
FRANK W. FAWSSETT,	WALTER SYKES,
E. C. FENOULHET,	ARTHUR EDWARD THOMPSON,
T. DEWAR FORBES,	G. GURNEY THOMPSON,
JOHN E. GARNER,	C. WILFRED VINING,
HARRY GREY,	GEO. H. VOS,
J. A. B. HAMMOND,	A. S. R. WAINWRIGHT,
A. W. HARRISON,	T. BRODRIBB WESTON,
HEATON C. HOWARD,	HERBERT WILKINS,
BASIL JACKSON,	CYRIL WILLIAMS,
C. A. LAUCHLAN,	E. H. WILLOCK,
E. HAYES MCLAUGHLIN,	HUGH B. WILMOT,
W. D. MCMURTRY,	G. DUNN WILSON,
R. B. MARJORIBANKS,	JAMES YOUNG.
JAMES METCALFE,	

May 23rd, 1911.

RESOLUTION: That, as registered medical practitioners would accept grave professional and financial risks if any agreement were entered

into to give, under the National Insurance Bill, in return for a capitation payment, ill-defined and probably increasing medical and surgical services to all classes in the community, before several years' experience of the proposed insurance against the cost of such services has put at the disposal of the State reliable figures and facts on which to base such a proposal, this representative meeting decides to recommend the medical profession to unite in demanding payment on a tariff of fees for work performed, and pledges the support of the Association for this purpose.

*** Many signatures to this letter were received too late for insertion.—ED. L.

To the Editor of THE LANCET.

SIR,—Would it not be better if the Government abandoned altogether the medical benefit portion of the Bill, as, on the face of it, it looks impossible for them to propose anything at all approaching a fair and reasonable payment of doctors. At present the profession is fairly satisfied with its lot and conditions, and the people also have been able to meet us to the general mutual satisfaction of each. Under the Insurance Bill the people affected will be better off and so able to pay better for the services they have required at the small amounts doctors have considerately made to them. Contemplate for a moment acute pneumonia valued at 6*s.*, to be followed, perhaps, in the same person and year by acute rheumatism, and, again, the anxiety, thought, &c., in carrying through a case of typhoid at 6*s.*—why, the idea is unthinkable and preposterous.

The profession must speak out in the press and to their Members of Parliament, and insist that if so much a head is to be paid nothing less than the Post Office sum of 8*s.* 6*d.* be offered; even that is too low, as all are strong, examined members. We must insist on free choice of doctors, and on *line* to be *drawn* as to who may not participate in benefit.

I am, Sir, yours faithfully,

Bow, N. Devon, May 20th, 1911. CHAS. H. HAYCROFT.

To the Editor of THE LANCET.

SIR,—The Bill proposed should meet with the most uncompromising opposition of the medical profession. A time has been when our Government said the General Medical Council was the chief medium of communication with the profession, and they left them to advise the Government of the day in all legislative enactments concerning them.

Things have travelled apace since then, and in my idea a bold sinister attempt is going to be made to degrade our calling. It ought to be met by a united front and be most determinedly and firmly fought and resisted.

I am, Sir, yours faithfully,

J. GILROY, M.B. Glasg.

Waterbeck, Dumfriesshire, May 22nd, 1911.

To the Editor of THE LANCET.

SIR,—Those responsible for the framing of the Bill do not seem to realise that all the great scientific discoveries in medicine and surgery during the last 20 years have added enormously to (1) the expense of treatment; the expense of equipment; and also to the responsibilities of medical practice. They forget that our everyday task for the State is not so much the treatment of disease but the prevention of disease; and this can only be brought about by bringing into play all the latest scientific methods to fight that enemy of health which is hidden from the naked eye—viz., "the microbe." It was suggested in a leading article of the *Daily Mail* on "Doctors and State Insurance," that the doctors were crying out too soon. But if you look back on recent legislature concerning the medical profession I think you would agree that we were not crying out soon enough. You must remember there is no Eight Hours Bill for the club doctor. The friendly societies and their members are quite willing, and always have been, for the club doctor to be sweated both night and day.

The medical profession have worked for years to promote better health and social welfare of the community, and no one ought to be more acquainted with this fact than the Chancellor of the Exchequer himself; but in spite of this he brings in a Bill in which he is careful to add: "That this is *not* a Medical Endowment Bill"—a Bill which, if adopted in its present form, will sweat an already oversweated profession. My one and only hope is that the profession will unite to a man and demand the rights which they truly deserve. Without the profession the scheme cannot work, and with them it can only work to the benefit of themselves and the community, if they are properly remunerated for work done.

To offer 6*s.* a year per head and control by friendly societies is nothing but an insult to the most truly philanthropic body of men in the world, and if the Bill should pass in its present form it amounts to nothing more or less than *State aid*, at the expense of the medical profession.

I am, Sir, yours faithfully,

H. J. GODWIN, M.B. Durh., F.R.C.S. Edin.

Winchester, May 22nd, 1911.

To the Editor of THE LANCET.

SIR,—If the payment to doctors "for work done" be not feasible, a suggestion which I think might meet with the approval of the bulk of the profession is the following: "That a reasonable capitation fee be paid on selected lives of men whose income is not more than £2 per week."

The difficulty of ascertaining the amount of a man's earnings could be obviated by his employer writing down (under a penalty for misrepresentation) the amount of the man's weekly wage. A space on the contribution card could be provided for this purpose.

I am, Sir, yours faithfully,

CHARLES E. HUTT, L.R.C.P. Lond., M.R.C.S. Eng.

Tottenham, May 24th, 1911.

To the Editor of THE LANCET.

SIR,—We are instructed as secretaries of the Preston Division of the British Medical Association and of the Preston Medico-Ethical Society to forward this copy of resolutions.

We are, Sir, yours faithfully,

WALTER SYKES,
EDRIDGE HEALEY, } Hon. Secs.

Preston, May 23rd, 1911.

1. That, whilst the medical profession of Preston and neighbourhood are willing to coöperate in any scheme of sickness insurance applied to the poor and necessitous under suitable conditions, they have not the slightest intention of allowing themselves to be sweated for the benefit of a large class of people who can very well afford to pay for medical treatment.

2. That they regard the proposals of the National Insurance Bill, with reference to medical benefit, as injurious to the public interest, because of its enormous extension of "contract practice," with its corresponding hindrance to sound scientific work, and its destruction of those personal relations that help to make medical treatment effective.

3. That they condemn the proposals of the Bill with regard to the medical profession as ruinous to a large number of medical men, and a grave injury to all of them.

4. Consequently, they hereby declare that they absolutely decline to take any part in the administration of the Act unless it is modified in the following directions: (*a*) That a household wage limit of 30*s.* per week be fixed for those receiving medical benefit; (*b*) that medical men engaging in practice under the Act shall deal directly with the Insurance Commissioners, and not with the friendly societies; (*c*) that in all cases payment shall be for work done, and not a capitation fee; (*d*) that this payment shall be a just and adequate one; (*e*) that all patients shall have free choice of medical attendant; and (*f*) that the conditions of service shall be determined by Parliament, and not left to the discretion of Insurance Commissioners, friendly societies, or local health committees.

To the Editor of THE LANCET.

SIR,—The following resolutions were adopted at a meeting of the medical men practising in Uxbridge and district held on May 22nd, 1911:—

1. That this meeting strenuously opposes those provisions in the Insurance Bill giving control of medical benefits to friendly societies, and maintains the principle of choice of doctor.

2. That medical benefit under the scheme must close at a wage limit of £2 per week.

3. That payment be by fee for each visit or other services rendered (as in "extra charges" under the Poor-law).

4. That we individually and collectively pledge ourselves to resign any appointment for medical attendance to friendly societies which we at present hold in this district and to refuse any similar appointment which may be offered if required to do so by the British Medical Association.

I am, Sir, yours faithfully,

May 22nd, 1911. A. CHARPENTIER.

To the Editor of THE LANCET.

SIR,—In your issue of to-day a correspondent writing under the title "Twenty-four Years a Practitioner," estimates that whereas he now makes about £600 per annum, under the Government scheme he will only make £458 16*s.*, taking the capitation fee at 4*s.* But Mr. Lloyd George has stated that the capitation fee will be 6*s.* This will add the sum of £141 18*s.* to the practitioner's income, making a total of £600 14*s.*, or the same as he now receives.

To my mind the sum of 6*s.* is far too little. The General

Post Office have contracted with a large number of medical men to attend postmen at the rate of 8*s.* 6*d.* per annum. It must be remembered that postmen are all healthy men following a healthy occupation. Why, then, should the Government ask us to attend a large number of people, some of whom certainly are in bad health and who follow unhealthy occupations, at the same time offering us a much lower remuneration for a proportionate greater amount of work? It seems to me that the Post Office, in granting the above scale, have made a precedent which the medical profession will do well to take the utmost advantage of.

I am, Sir, yours faithfully,

Llangammarch Wells, May 20th, 1911. W. BLACK JONES.

To the Editor of THE LANCET.

SIR,—In the letter of your correspondent, "Twenty-four Years a Practitioner," there are two important errors in the figures given by him. The number of paupers is not 22 per cent. of the population, but is 22 per 1000 inhabitants, and consequently the total number in the United Kingdom does not approach 9,680,000, as he supposes, but is approximately 968,000, and the population, after deducting the gross number of private patients and paupers, is nearer 41,000,000 than 32,000,000. Again, if there are 30,000 medical practitioners to 32,000,000, it is 1 to 1066, not 1 to 1222.

On the supposition that 30,000 practitioners are paid 4*s.* a head for 41,000,000 persons, each one would receive £273 per annum on an average, and if the payment were raised to 6*s.* a head the amount would be £410. Your correspondent does not mention midwifery, but this would provide another source of income that should be taken into account.

I am, Sir, yours faithfully,

May 20th, 1911. C. E. S.

To the Editor of THE LANCET.

SIR,—I have read with sympathetic interest the letter of your correspondent "Twenty-four Years a Practitioner" in your current issue, and your leading article thereon. I trust you will allow the matter to be fully ventilated in your columns, as our profession appears to be face to face with a very grave crisis. It seems to me that the proposed measure will have a very injurious and far-reaching effect on the prospects of a practitioner whose lot is cast, as mine is, in a typical and not very wealthy London suburb. From the better-class patients in this neighbourhood we receive, on an average, 3*s.* 6*d.* for each visit, and 2*s.* 6*d.* for an ordinary consultation at the practitioner's own house; but for a very large proportion of the population even such moderate charges are quite prohibitive. We quite appreciate this fact, and are therefore willing to accept from poorer patients, who constitute a great part of our *clientèle*, shilling fees for consultations and anything up to 2*s.* for visits at the patient's house. The only alternative is to accept such patients on "club" terms, and agree to the absolute slavery which such terms imply. Under the proposed scheme—if I understand it rightly—we shall be compelled to attend all such patients for the miserable pittance of 4*s.*, or, if the Chancellor is very generous, 6*s.* a year! In other words, a bedridden invalid will be entitled to demand a daily visit for a whole year (or even more frequent attendance if circumstances require it) for this beggarly remuneration.

Why, I wonder, does the Chancellor single out the medical profession for such a fate? Would it not be equally reasonable to make a similar arrangement with regard to food and clothing? Let everyone with an income of less than £160 pay a small weekly insurance; let him order a leg of mutton from his butcher whenever he feels disposed, and then let the butcher receive from the Treasury the sum of 4*s.* a year!

I am, Sir, yours faithfully,

May 21st, 1911. SUBURBAN.

To the Editor of THE LANCET.

SIR,—In this grave crisis, why do not all medical men write and refuse to have anything to do with the scheme? I am sure, as a united profession, we shall get the support of the Royal Colleges, universities, the Medical Defence Union, the British Medical Association, and the Medical Protection Society. No practice can be carried on without proper fees from people whose income is from 25*s.* to £3 per week. If these people are all swallowed up by the iniquitous club system our incomes will not keep us. And note the anomaly—quacks, bonesetters, herbalists, midwives, and prescribing chemists will be allowed to charge according to the work done or goods supplied; but doctors, after going through a long and expensive curriculum, are called upon to attend rich and poor alike for less than the charge of two visits on a working-class patient to-day. Mr. Lloyd George says (*vide Daily Mail* of May 22nd) the "necessary drugs are worth 1*s.* 6*d.*"; has anyone ever heard of such absurdity? Drugs, bottles, pill boxes, chip boxes, sealing-wax, corks, wrapping-up paper, &c., constitute a great item of expense. They cost me between £60 to £70 per annum. And what about the cost of motoring, driving, instruments, appliances, &c.? And the sale of our practice? Will the Government give compensation for the loss of goodwill, and the poverty to which our wives and children will be subjected? We have nothing to say against insurance; but insurance at our expense is a monstrous injustice. If the Bill passes we should take heed that only people with £1 a week or less should get medical benefits at 10*s.* per head per annum. All others should be charged the usual working-class visiting fee.

I am, Sir, yours faithfully,

May 22nd, 1911. FIAT JUSTITIA.

THE OPERATIVE TREATMENT OF CLEFT PALATE.

To the Editor of THE LANCET.

SIR,—I have just read in THE LANCET an account of the meeting of the Surgical Section of the Royal Society of Medicine held on May 9th, at which there was a demonstration of cleft palate cases, and subsequently a discussion on the various methods of operative treatment, and I am surprised to see all that is reported is what the surgeons said, and that there is no reference whatever to the most interesting and instructive demonstration of cases which took place before the debate. The chief reason for this meeting being held was that a definite answer might be given to the oft-repeated question, "At what age should a cleft of the palate be closed—in early infancy or in early childhood?" If during early infancy, then the only way in which the cleft can be closed is by means of a turn-over flap (Lane's operation); if, on the other hand, the operation be postponed until early childhood, the cleft may be closed by paring the edges and bringing them together in the middle line (Langenbeck's method).

As the main object in closing the cleft is to enable the child to speak distinctly, then surely the question as to which is the better method is entirely a matter of evidence, and the witnesses must be the children operated upon and not the surgeons who performed the operations. At the meeting a multitude of witnesses were brought forward by several surgeons (more especially by Mr. James Berry) who favour operating during early childhood, and it was most interesting and encouraging to hear how admirably they bore testimony in favour of Langenbeck's method by repeating clearly and distinctly such words as "sixpence," "cup and saucer," and even "British constitution." Unfortunately the surgeon who for some years has so conspicuously and so persistently advocated the flap operation during early infancy for some reason or other did not think it desirable to bring forward even one child as witness out of the many hundreds, possibly thousands, of cases he must have operated upon. Certainly two or three cases were shown in which the cleft had been closed by the flap method during infancy, but articulation was so imperfect that the children could with difficulty make themselves understood, and later on will find it hard to earn a livelihood.

For some years I have been interested in the treatment of cleft palate, and speaking from considerable clinical experience can say that a well-formed and freely moveable soft palate is essential for clear articulation. Now if a cleft of the soft palate be closed by means of a turn-over flap, not only are the muscular arrangements of the palate ignored but a raw surface is exposed that must heal by granulation and contract, so resulting in a soft palate too short, too tight, and incapable of movement since it is largely composed of scar tissue. If, on the other hand, the operation be performed during early childhood, then the edges of the cleft may be united in the middle line, and a well-shaped and freely

moveable soft palate fashioned, containing merely a thin central line of scar tissue.

I regret very much that I was unable to take part in the debate, for I was most anxious to cross swords with those who advocate operating during early infancy, but I had to return to Liverpool by the 5.55 train with the four children I had brought with me. However, we all heard the children speak, and I firmly believe that had a vote been taken of those surgeons present an overwhelming majority would have been obtained in favour of delaying operation until early childhood. I went to the meeting anxious to learn what is true, in order to do what is right; and I know now it is true that when a cleft of the palate is closed during early infancy by the flap method the child will never be able to speak distinctly, and I know it is right to delay the operation until early childhood and close the cleft in the ordinary way, for the child may then speak in a perfectly natural manner.

I am, Sir, yours faithfully,

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SIR,—I have read with great interest your very full report on the discussion on cleft palate and its treatment held by the Surgical Section of the Royal Society of Medicine on May 9th. A discussion of this sort by experts on a question as yet undecided is of great importance. But, necessarily, upon this subject very few surgeons are experts. To the beginner and to the surgeon who has but few opportunities of operating for cleft palate the question is not so much whether he will close a cleft in the best possible manner, but whether he can rely upon being able to close it at all. So that his choice will necessarily fall upon the operation in which approximation is most easy, the result least influenced by errors of technique, by lack of asepsis, lack of expert nursing, and other influences outside his own control. There can be little doubt that the flap operation is more likely to stand the strain of adverse circumstances than the median one. The errors of technique likely to be made by a surgeon inexperienced in the performance of a flap operation are, in my experience at any rate, not likely to prejudice seriously the chance of a successful result, whereas the chances of union after bringing together the margins of a wide cleft by Langenbeck's method are, to say the least, uncertain. Some degree of oral sepsis is an invariable consequence of all operations for cleft palate. The palate closed by a flap operation with its wide area of overlapping stands suppuration best. In fact, it may be said with almost complete truth that the flap operation when fully understood and in moderately capable hands is almost independent of post-operative mishaps. This can hardly be said of the median operation.

Personally I have performed Mr. Lane's operations only 22 times; I have had two failures, neither, I believe, irremediable; and my patients have ranged from 6 weeks of age to 28 years. Looking at the cases in detail, I do not believe that I could have closed the wider clefts at all by Langenbeck's method, though I am prepared to admit that in the hands of experts, and at a later date than that at which I operated, a successful result would have been secured.

There are few surgeons who have the opportunities either of Mr. Lane or Mr. Berry. There are few, I believe, with their manipulative skill. There are many whose experience of cleft-palate work is slight, because their opportunities are few, and who would like their work in this branch to be on the same level of excellence as the rest of their operative procedures. I firmly believe that such men would get a higher percentage of successes by Lane's methods than by Langenbeck's operation.—I am, Sir, yours faithfully,

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In the small hours of the morning I was called in consultation by a neighbouring practitioner over the case of an infant with undoubted intussusception (ileo-cæcal). The "sausage-shaped" tumour, together with other classical signs, complete retention of urine, with a distended bladder, &c., were all present. I at once suggested perflation under chloroform, quoting a previous successful case of mine. My friend was not in favour of the procedure, as he and his father had lately had two unsuccessful cases.

However, as I willingly consented to take all risk and blame upon my own shoulders chloroform was administered, and with my left hand carefully manipulating the infant's abdomen, my right cautiously using an ordinary Higginson's syringe, I commenced perflation. The descending, transverse, and ascending colon in turn were distended, my left fingers *stroking, secundum artem*, the tumour. To my great pleasure I suddenly felt the "sausage" reduce, as one might restore a child's ball (with the same sensation and "click") that had partly collapsed from its original rotundity, and the tumour became merged into a normally shaped bowel; at the same instant the bladder retention was relieved and the anæsthetised infant passed a strong stream of urine. There were no after complications and no return of the intussusception.

With just one warning remark I will cease trespassing upon your valuable space. For success it is absolutely necessary that such interference should be early; later, obvious complications would render the procedure both dangerous and useless, if not fatal. Laparotomy is then the only justifiable resort. I am, Sir, yours faithfully,

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The use of air enemata was rather common in treatment of the disease in Ireland at the beginning of the nineteenth century, and in Scotland ("Edinburgh Medical and Physical Dictionary," 1807) we read (article, Intussusception): "Dr. Hall thinks the forcible and copious injection of air, or of simple liquids, seems to promise the most success." Henoch ("Lectures on Children's Diseases"), in his lecture on the treatment of intussusception makes mention of "inflation of the bowel by means of bellows."

Those who are interested in the treatment of the condition will find numerous references in Neale's "Medical Digest," the first and second series of the "Index Catalogue," and the "Index Medicus." Withal I have found no case in which serious intestinal invagination occurred in so young a subject as that reported by Mr. J. Wilson, who is to be congratulated on his success and for enriching our clinical records with his report.

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SIR,—In Mr. J. Wilson's case of intussusception in an infant reduced by an air enema published in THE LANCET of May 20th, p. 1381, the report winds up: "I do not know if an intussusception has been reduced by an air enema before, but on this occasion I think the end justified the means." At p. 496 of Sir T. Watson's classic

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lectures, fourth edition, Vol. II., there is a case given of inflation that was had recourse to at the last moment as a last resource. The proceeding was carried out by Mr. Erichsen and met with complete success. Several physicians were in consultation on the case, the little patient, aged 10 or 11, being the child of a physician.

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South Wales, May 22nd, 1911. E. HOPKINS.

ORANGE FREE STATE MEDICAL AND PHARMACY COUNCIL.

To the Editor of THE LANCET.

SIR,—May I be allowed, through the medium of your columns, to add to a somewhat abbreviated account, appearing in the number of THE LANCET received by me by last week's mail, of the circumstances which led up to the resignation of the majority of the members of the Medical and Pharmacy Council of the Orange Free State.[1]

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This made the subject of an acrimonious discussion in the public press, and General Hertzog, after he was elected to the Union Parliament, made a speech at Smithfield in which he was reported to have said that the action of the Council was unworthy and showed how the Jingoes were trying "to do the Dutch down." The Council thereupon met and called upon its responsible head, the Minister for the Interior, to investigate the whole matter thoroughly. Meanwhile General Hertzog, who was now Minister of Justice, in another speech at Fauresmith is reported to have cast ridicule on the action of the Council, and to have repeated his animadversions in an aggravated form.

As your correspondent states, after a lengthy correspondence with the Minister of the Interior, he finally refused to take any steps in the matter, and the majority of the members decided that the only course consistent with their honour and the best interests of the profession was to resign. They felt, rightly or wrongly, that it would be useless and wrong to deal direct with General Hertzog in the matter: useless, because from his position as Attorney-General here at the time he could have obtained all the information he desired and could have heard and had explained to him the attitude which the Council adopted and the reasons for it—instead of which he apparently made the attack on the Council, relying upon admittedly *ex parte* and very biassed newspaper reports; and wrong because he is not the minister responsible for the proper execution by the Council of its functions.

In conclusion, I would say, in fairness to all of us who resigned, that we were actuated by the feeling that we must uphold the honour and integrity of the profession, and by no other feeling. The two most important functions of this, as of all other medical councils, are the control of registration and the exercise of disciplinary powers over the profession. We felt that a body of professional men who had been accused publicly by a Minister of the Crown of being influenced in the exercise of those functions by motives of racial animosity, and who had failed to obtain even an investigation into the accusation from the minister to whom they were responsible, could not continue to hold office without receiving a fresh mandate from the electorate, the medical practitioners of the province, nor could they continue to act as nominees of a Government who refused to inquire into such charges.

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Late President of the Medical and Pharmacy Council of the Orange Free State.

Bloemfontein, Orange Free State, May 1st, 1911.

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SIR,—May I correct an error in the otherwise excellent report of the Royal Society's soirée published in your issue of last week?

The object of the experiments by Dr. Dudgeon and myself was to ascertain how far the factor of drying *in vacuo* might be lethal *per se* to bacteria if supposed to exist in interstellar space. Amongst several bacteria tested the B. pyocyaneus gave the exceptional result that whilst it dies in the air (excluded from light) within a space of three months, it is still alive when dried in a vacuum tube at the end of four months. How much longer the bacillus will remain alive *in vacuo* we are still testing. Sir James Dewar has shown that bacteria, although not killed at the temperature of liquid air, are, nevertheless, killed whilst so frozen by the action of the ultra-violet rays, and has urged this as a cogent reason for believing that no bacteria in a frozen condition would survive in interplanetary space where the rays in question are in full activity. The action of the rays upon the dried bacillus *in vacuo* we are investigating.

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RESOLVING POWER OF THE MICROSCOPE.

To the Editor of THE LANCET.

SIR,—In the review of our booklet entitled "The Microscope and Some Hints on How to Use It," which appeared on p. 1212 of this journal (May 6th, 1911), the reviewer contends that the resolving power of the microscope is expressed by the formula $\frac{0{\cdot}61\lambda}{a}$, and not $\frac{\lambda}{a}$, as stated in our booklet, where λ is the wave-length of the light brought to bear upon the object and a the numerical aperture of the objective. In support of his contention the reviewer points to the formula given in Whittaker's well-known book on the "Theory of Optical Instruments." This does not, however, affect the accuracy of our statement, since Whittaker has inadvertently allowed an error to slip in, inasmuch as he treats a formula which holds good for the telescope as if it were directly applicable to the microscope. This is not the case, and the correct formula is that given in our booklet. That is to say, the smallest distance between two adjacent bars of a grating which can be resolved is given by the formula $d = \frac{\lambda}{a}$. Hence when observing with light of WL $= 0{\cdot}55\mu$, which corresponds to the brightest region of the solar spectrum, the smallest distance which can be resolved with a high power dry lens of N.A. 0·95 is $d = 0{\cdot}55\mu$, whilst in the case of an immersion lens of N.A. 1·40 it will be $d = 0{\cdot}39\mu$.

It should be borne in mind that this holds good for direct central illumination only. The use of oblique pencils furnishes indeed a means of resolving elements which are twice as close together—i.e., $d = 0{\cdot}29\mu$, and $d = 0{\cdot}20\mu$ respectively.

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May 16th, 1911. E. LEITZ.

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SIR,—I am obliged for the opportunity of seeing Mr. Leitz's letter and for the permission to drop the anonymity of a reviewer. I may say that there seems to be some

moveable soft palate fashioned, containing merely a thin central line of scar tissue.

I regret very much that I was unable to take part in the debate, for I was most anxious to cross swords with those who advocate operating during early infancy, but I had to return to Liverpool by the 5.55 train with the four children I had brought with me. However, we all heard the children speak, and I firmly believe that had a vote been taken of those surgeons present an overwhelming majority would have been obtained in favour of delaying operation until early childhood. I went to the meeting anxious to learn what is true, in order to do what is right; and I know now it is true that when a cleft of the palate is closed during early infancy by the flap method the child will never be able to speak distinctly, and I know it is right to delay the operation until early childhood and close the cleft in the ordinary way, for the child may then speak in a perfectly natural manner.

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RESOLVING POWER OF THE MICROSCOPE.

To the Editor of THE LANCET.

SIR,—In the review of our booklet entitled "The Microscope and Some Hints on How to Use It," which appeared on p. 1212 of this journal (May 6th, 1911), the reviewer contends that the resolving power of the microscope is expressed by the formula $\frac{0{\cdot}61\lambda}{a}$, and not $\frac{\lambda}{a}$, as stated in our booklet, where λ is the wave-length of the light brought to bear upon the object and a the numerical aperture of the objective. In support of his contention the reviewer points to the formula given in Whittaker's well-known book on the "Theory of Optical Instruments." This does not, however, affect the accuracy of our statement, since Whittaker has inadvertently allowed an error to slip in, inasmuch as he treats a formula which holds good for the telescope as if it were directly applicable to the microscope. This is not the case, and the correct formula is that given in our booklet. That is to say, the smallest distance between two adjacent bars of a grating which can be resolved is given by the formula $d = \frac{\lambda}{a}$. Hence when observing with light of WL $= 0{\cdot}55\mu$, which corresponds to the brightest region of the solar spectrum, the smallest distance which can be resolved with a high power dry lens of N.A. 0·95 is $d = 0{\cdot}55\mu$, whilst in the case of an immersion lens of N.A. 1·40 it will be $d = 0{\cdot}39\mu$.

It should be borne in mind that this holds good for direct central illumination only. The use of oblique pencils furnishes indeed a means of resolving elements which are twice as close together—i.e., $d = 0{\cdot}29\mu$, and $d = 0{\cdot}20\mu$ respectively.

I am, Sir, yours faithfully,

May 16th, 1911. E. LEITZ.

To the Editor of THE LANCET.

SIR,—I am obliged for the opportunity of seeing Mr. Leitz's letter and for the permission to drop the anonymity of a reviewer. I may say that there seems to be some

obscurity about the resolving power of a microscope. There is no doubt about that of a telescope, and Whittaker treating the case of a microscope in the same way as that of a telescope gives my expression $\frac{0{\cdot}61\lambda}{a}$. Lord Rayleigh, after dealing with the resolving power of a telescope ("Scientific Papers," vol. iv., p. 247), says in a footnote "that the theory is general and that such effects are not limited as is sometimes supposed in the case of the microscope." Winkelmann,[1] however, supports Mr. Leitz's contention. I am afraid you will consider the subject too intricate for discussion in THE LANCET. If I have erred in following Lord Rayleigh and Whittaker, I take this opportunity of offering my apologies to Mr. Leitz.

I am, Sir, yours faithfully,

May 19th, 1911. A. S. PERCIVAL.

THE TREATMENT OF DIABETES.

To the Editor of THE LANCET.

SIR,—My attention has been called to an interesting letter in THE LANCET of April 15th, p. 1033, concerning the Guelpa treatment of diabetes and other constitutional diseases. Dr. Oscar Jennings, a well-known authority on the treatment of the morphine habit, refers to some remarkable results obtained by himself and others by this method, which is steadily gaining ground in the confidence of practitioners—in Paris, at any rate, if not farther afield.

In spite of Guelpa's publications in the medical journals, and communications to medical societies in Paris and to the Section of Medicine at the London meeting of the British Medical Association last year, I think there is little doubt that the principles of his treatment are comparatively unknown out of France. His aim is to prove the value, in many chronic ailments, of systematic purging and starvation continued for one, two, three, or even more days. The one without the other, he maintains, is harmful, purgation, unless accompanied by complete rest to the digestive tract, causing as much constitutional disturbance as abstention from food without daily and abundant evacuation of the intestinal content.

Guelpa's experience, as that of all those who have studied his work and applied it in practice, leads to some curious conclusions—conclusions that, to the ignorant and prejudiced, are excellent matter for jest and levity! For example, the somewhat paradoxical statement may be made that the longer one starves, in this method, the less one experiences real hunger—within limits, that is to say, of three to four or five days. In other words, hunger is a sign of auto-intoxication relieved by purging the organism of the waste products of metabolism. For the first 24 hours there is discomfort, more from the interruption to one's habit of three or four meals daily; the second or third day there is less and less sensation of hunger. Further, Dr. Guelpa proves that the more abundant the purge (again within limits of reason) the less the colic. For example, while one glass of Hunyadi Janos water will produce several watery stools and cause discomfort for hours, the whole bottle drunk rapidly, within, say, 15 minutes, will cause no colic whatever and will act satisfactorily and completely within a very short time, sometimes a few minutes. Guelpa aptly compares this result to the flushing of a closet—impossible with a small amount of water, complete and rapid with a sufficient amount. The purge must be dilute and should be taken hot. No food should be allowed within 24 hours at least, but water, infusions, and decoctions (tisanes) may be freely taken. Certainly the success that I have obtained in, for example, severe diabetes is such as to encourage me in the use of what, after all, in its details, is a new therapeutic procedure.

May I give your readers a brief *résumé* of one of my cases in the hope that they may be interested and test the matter themselves? The patient, a woman, aged 25, consulted me at the Hertford British Hospital on Feb. 2nd last, 1911. Although not presenting positive signs of advanced diabetes, such as emaciation, polyuria, extreme thirst, &c., she stated that she had been treated in London since August, 1910, for that disease. On examination we found a daily emission of about 60 oz. of urine, with a density of 1036 to 1040, containing over 10 per cent. of sugar—that is, 150 grammes or 6 oz. in the 24 hours, as well as acetone and diacetic acid. I communicated with Dr. G. R. Harcourt of Leyton and Dr. F. W. Pavy, under whose care she had been in London, and the latter courteously informed me that "in August the patient's urine contained 108·7 per 1000 of sugar. Associated with this very large quantity of sugar there was a certain amount of acetone, but no diacetic acid." "The case evidently," Dr. Pavy added, "is a very bad one." Dr. Harcourt writes that the patient could not be kept to the diabetic diet described, and according to the patient's information the sugar never fell below 2 per cent. To cut a long story short, after some days' ordinary diet the "purging-fasting" cure was begun on Feb. 26th and continued on the 27th and 28th. The density of the urine fell from 1035 on the first day to 1025, and on March 1st, with the very reduced output of 25 oz. and a density of 1025, sugar was completely absent, her diet now consisting of green vegetables, beef-tea 20 oz., tea with milk 20 oz., and water. On March 3rd (with a specific gravity of 1015 and a complete absence of sugar) fish and chicken were added to the diet. A toasted rusk was also allowed, and a further indiscretion on the part of the patient (indulgence in a slice of bread-and-butter) led the next day to the reappearance of sugar.

These details show, I think, that the case was a real one of diabetes and no mere glycosuria. On March 11th, 12th, and 13th the purge-fast cure was repeated, and on the 12th the density fell to 1010 with, naturally, complete absence of sugar. After this her diet was fairly generous and consisted of greens, tea, beef-tea, fish, chicken, meat, salad with eggs, chicken broth, and even potatoes were occasionally permitted with no untoward result. Bread, toast, biscuits, or any of the so-called diabetic foods caused a reappearance of the sugar, but the diet, without these articles, was a free one and would have satisfied anyone intelligent enough to realise the gravity of the issue at stake.

A week later, without any increase in the fluids taken, a veritable diuresis set in, the urine rising from 60 and 70 oz. to 80, 90, and even 145 oz., with such densities as 1010, 1008, and 1006. In her five weeks' stay in hospital, during four of which she was dieted, she gained a pound in weight, was entirely free from glycosuria for 21 days, its appearance on the other days being always due to some dietary indiscretion made with or without our consent. The patient then left, perhaps far from cured, but with a temporary improvement that was of the utmost importance not only, as Dr. Jennings suggests in his letter, from the point of view of life insurance, but from the point of view of the patient's whole future.

My conclusion, then, is in such cases to give the Guelpa treatment a fair trial; every day for three days a whole bottle of Hunyadi Janos or other dilute saline hot, with abstention from all nourishment except water, weak tea with sugar and a little milk, clear-strained vegetable soup or any hot infusion, and these only according to the patient's thirst and hunger, which are much less than might be expected. Apologising for taking up so much of your valuable space,

I am, Sir, yours faithfully,

Paris. A. A. WARDEN, M.D.

[1] Handbuch der Physik, Band vi.

PARATYPHOID FEVER.

To the Editor of THE LANCET.

SIR,—Permit me, as one familiar with the scientific work being done in India by officers of the Royal Army Medical Corps and also conversant with the statistical facts relating to both the European and Indian armies, to enter a plea for clear thinking as to the use of the term "paratyphoid fever." From recent literature on this subject there appears to be a definite tendency at home to apply the term "paratyphoid fever" to cases of infection by the micro-organism known as bacillus paratyphosus B. Concurrent with this there is a tendency to overlook the infection by the closely allied micro-organism known as bacillus paratyphosus A. This latter attitude may be due to the apparent infrequency of paratyphoid A infection in England or Europe. Before the nomenclature becomes crystallised and passed into general use by the profession, in the sense suggested by the recent literature published, it would be well for the profession to realise that in India, and also in South Africa, there is recognisable a definite clinical entity caused by the bacillus paratyphosus A. This clinical entity is a fever or pyrexia of the continued type. The view is worth bearing in mind that

it is to this continued fever, often of comparatively short duration and marked by a low case-mortality rate, caused by the bacillus paratyphosus A, that the term "paratyphoid fever" should be applied and applied only, at least for the present. Practically all the Indian cases are instances of infection by the "A" bacillus, and so far no case is diagnosed in the army unless the incriminating micro-organism has been isolated from the case.

Without going into the question of what is meant by a bacillus paratyphosus B, or discussing how confusion has arisen, or the methods by which confusion can be avoided as to whether a given micro-organism is bacillus paratyphosus B, or bacillus suipestifer, it appears desirable to recognise that infections by these micro-organisms are really not "fevers" as ordinarily understood, but rather explosive infections of the nature of an acute enteritis commonly the outcome of what is called "food poisoning." As explained, the infection by the "A" bacillus conforms to quite a different type and is best described as "paratyphoid fever." From this point of view, it seems desirable that a confusion of ideas be avoided and that, failing better terms of expression, we limit the use of the expression "paratyphoid fever" to cases of fever in which the causative micro-organism is the bacillus paratyphosus A, and describe as "food poisoning" those in which the causative micro-organism is either the bacillus paratyphosus B, or the bacillus suipestifer or the other closely allied organism, the bacillus enteritidis of Gaertner.

It must be admitted we have still much to learn regarding all these infections, and subsequent investigation may compel us to modify our conceptions as to the whole group, but speaking in the light of our present knowledge it is submitted that the views here outlined afford the safer and the wiser attitude to adopt. A considerable mass of evidence is accumulating and much knowledge is being acquired in India as to the prevalence, symptoms, epidemiology, and identity of the causative micro-organism of paratyphoid fever. In fact, may I be pardoned for saying so, there is a small group of officers of the Royal Army Medical Corps working in India who probably know more about infection by the bacillus paratyphosus A (paratyphoid fever) than anyone in Europe. We are hopeful that when their work is made public the present ambiguities may be removed.

I am, Sir, yours faithfully,

R. H. FIRTH,

Simla, May 4th, 1911. Colonel, Royal Army Medical Corps.

SOLID GLYCERINE-GELATINE TAMPONS.

To the Editor of THE LANCET.

SIR,—As every medical man has at times found difficulty in introducing glycerine-soaked tampons into the vagina I have asked the British Drug Houses Company to make me solid glycerine-gelatine tampons, which can be carried about as easily as rectal suppositories of glycerine. They are made in two sizes, for virgins and multiparæ, and are blunt-nosed with square ends. I have found them very convenient and handy, and should anyone find the smaller size too big for case in hand he can soak it in hot water till it is the required size.

I am, Sir, yours faithfully,

CHAS. AITKEN, M.D. Edin.

Penarth, Glam., May 16th, 1911.

THE RECENT ELECTION OF A DIRECT REPRESENTATIVE.

To the Editor of THE LANCET.

SIR,—I wish to thank most heartily through your columns "one and all" (to use the Cornish motto) of the 4049 members of the medical profession who voted for me in the late election for a Direct Representative on the General Medical Council. The great measure of success I attained warrants me in thinking that I shall be justified in appealing once more to the registered practitioners of England and Wales when what may be termed "the general election" comes off in November of this year.

It is to be regretted that only 10,106 out of 25,472 on the Register took the trouble to vote. I have received some communications to the effect that voting papers have not been received. That can scarcely be the case if the Registrar of the Council has been notified as to the addresses correctly. But it might be well for my correspondents to communicate with the Registrar.

I am, Sir, yours faithfully,

Plymouth, May 23rd, 1911. GEO. JACKSON.

SOME UNUSUAL EFFECTS OF PERFORATED GASTRIC ULCER.

To the Editor of THE LANCET.

SIR,—The case reported by us under the above heading has been misapprehended by your correspondent, Mr. Paul B. Roth. It is not claimed that the spinal curve was established in 11 months, though this was the duration originally, but wrongly, assigned to his illness by the patient. The (presumed) perforation of the stomach took place four years before the man came under notice. The curve is a permanent one.—We are, Sir, yours faithfully,

WILLIAM P. S. BRANSON.

London, May 22nd, 1911. T. P. LEGG.

"THE LANCET" REVIEW OF THE "ANNALS OF TROPICAL MEDICINE AND PARASITOLOGY."

To the Editor of THE LANCET.

SIR,—Dr. David Thomson, in THE LANCET of yesterday, questions the accuracy of the review of the "Annals of Tropical Medicine and Parasitology" which appeared in THE LANCET of May 13th. On several points I think he is self-contradictory. Without going into details, I will take it that what he intends to say is that in addition to the statement that "*the increase of the parasites is due to their sudden and active multiplication*," he and his collaborator, Major Ronald Ross, gave a secondary explanation in another part of their paper. In writing the review two courses were open. The material as it was could be taken and dealt with as it must appear to the reader of average intelligence upon one perusal, or it could have been pointed out that there was a secondary and *separate* explanation, which could have been dealt with in detail. In my first draft of the review, which I will gladly send to you with full permission to hand it on to Major Ross and Dr. Thomson, I had adopted the second method; the length of the review, however, seemed to me out of proportion to the matter, and so I had recourse to the former and briefer method. Dr. Thomson, in his letter to you, quotes from the paper of which he is part author in order to prove that his and Major Ross's explanation of the increase and decrease in the numbers of trypanosomes had been entirely misunderstood by the reviewer. He quotes his paper, but he does not quote it sufficiently. He quotes the review, but he does not quote it fairly, for only half a dozen lines before the passage of which he complains there is a quotation from the paper which should have made it sufficiently clear to him that the reviewer had fully grasped the explanation offered with regard to the multiplication of trypanosomes. He thus induces me to deal with the paper in question more seriously than I had thought it my duty in writing the review.

In the review I made the following quotation: "It appears to be a law (at least, it seems to hold good, we think, with regard to leucocytes and trypanosomes) that the extract of dead animal cells stimulates the corresponding live cells to increase in numbers." The text of the paper runs on as follows: "This would appear to support the hypothesis put forward by Dr. H. C. Ross, that the extracts of dead tissues promote the proliferation of living cells." The hypothesis referred to, recently advanced by Mr. H. C. Ross, is fundamentally opposed to the whole of the theories and practice of antitoxins and vaccines, and the success of the application of these theories must be re-explained before Mr. Ross's hypothesis can be accepted. Moreover, nothing that Mr. Ross has written in describing his observations upon the effects of the so-called extracts of dead upon living cells even suggests to anyone conversant with cell phenomena that a multiplication of cells is thus induced. With this alone it is sufficiently obvious that Major Ross and Dr. Thomson do not give the same explanation for the multiplication of trypanosomes as that offered by Massaglia, Thiroux, and others. But the following passage from their paper suggests very strongly that Major Ross and Dr.

Thomson themselves felt at the time they wrote that they differed from Massaglia: "Here it is clear that Massaglia has observed and has tried to explain the occurrence of these rises and falls of trypanosomes. Our opinions are as follows." This implies that, in the opinion of Major Ross and Dr. Thomson, Massaglia had failed to explain the phenomenon in a satisfactory manner. Therefore, in spite of Dr. Thomson's protest that he and Major Ross "do not disagree with the explanation of Massaglia," I must adhere to my statement, and repeat that "the authors appear to disagree with the explanations of Massaglia, Thiroux, and others with regard to the increases and decreases in the number of parasites in trypanosomiasis." In these explanations, including the explanation made by Dr. H. B. Fantham referred to particularly by Dr. Thomson in his letter and by me in the review, there is nothing antagonistic to what we know about the production and action of antitoxins and vaccines. Major Ross and Dr. Thomson advance an explanation for the periodic increase of trypanosomes which is incompatible not only with what we know of antitoxins and vaccines, but also with their own explanation of the decrease.

In the paper by Major Ross and Dr. Thomson there are not, I hold, original conclusions which are justified by the observations recorded. The facts are of an indefinite character, and might have been used with great caution as private notes in connexion with further and more adequate observations upon other cases of trypanosomiasis. The conclusions, notwithstanding this, are general and far-reaching. The data are totally inadequate to the conclusions.

I am, Sir, yours faithfully,

May 21st, 1911. THE REVIEWER.

THE INTERNATIONAL PLAGUE CONFERENCE AT MUKDEN.

(FROM OUR OWN CORRESPONDENT.)

(*Continued from p. 1383.*)

EIGHTH DAY (APRIL 12TH).

Professor GALEOTTI (Italy) opened the meeting with a paper on Serum Therapy, recounting the work done by Professor Lustig and himself, mainly among bubonic cases. He had not found the serum prepared by them to have any effect in pneumonic cases.

Surgeon-General UYAMA (Japan) opened a discussion on Prophylactic Inoculations with a paper on the vaccinations he had done on 1923 soldiers, with killed agar emulsion vaccine which he had obtained from Professor Kitasato's laboratory in Japan. This, he found, gave a rather strong reaction, but not in any way dangerous to those inoculated.—Professor ZABOLOTNY, Dr. BOGATSKY, and Dr. P. HAFFKINE gave an account of the reactions obtained in the vaccination of 8685 people at Harbin, and their general experience was that it did not give sufficient protection against pneumonic plague. A discussion followed.

Dr. R. P. STRONG (America) read a paper on the Results of 25 Necropsies Performed at the Plague Hospital, Mukden, by himself and Dr. Teague. It went into the morbid anatomy of pneumonic and septicæmic plague very thoroughly, and was regarded as a valuable contribution to the work of the Conference. The main points of the paper are: That epidemic plague pneumonia results from inhalation, the primary point of infection being the bronchi. Through the bronchi the plague bacilli reach the lung tissue, and, rapidly multiplying there, produce at first pneumonic changes of the lobular type, and shortly afterwards more general lobar involvement of the lung tissue. The blood becomes quickly infected and a true bacteriæmia results in every case. Secondary pathological changes occur, particularly in the spleen, bronchial glands, heart, blood-vessels, kidneys, and liver. The fact that the bronchial glands at the bifurcation of the trachea are always much more severely affected than any of the other lymphatics argues against the theory that epidemic plague is primarily a septicæmic disease and that the lungs are affected secondarily from the blood. Moreover, in the earliest stage of the disease the blood may be free from plague bacilli. The condition observed in the trachea and bronchi in epidemic pneumonic plague is pathognomonic of this condition alone. From the appearance of the mucous membranes of the throat and larynx a diagnosis of pneumonic plague may sometimes be made. The tonsils may become secondarily infected in pneumonic plague, just as other lymph glands—for example, the bronchial ones—become so affected. However, in pneumonic plague death takes place before any very marked macroscopic changes occur in the tonsils. There is no doubt, also, that the tonsils may become primarily infected in epidemics of pneumonic plague, just as has occurred in sporadic cases during epidemics of bubonic plague. This, however, is not the common mode of primary infection, and in such cases involvement of the lymphatic glands of the neck occurs early in the course of the disease. The fact that the œsophagus was found to be normal in every case examined constitutes another argument against the idea of primary intestinal plague infection, since in many of these pneumonic cases plague bacilli must have been repeatedly swallowed in the bronchial secretions and saliva.

NINTH DAY (APRIL 13TH).

Dr. Y. S. WANG (China) gave an interesting account of pneumonic plague in donkeys and mules. In a miller's compound outside the East Gate, Mukden, a certain donkey with coughing and blood-stained mucus died. Another was taken ill the next day, and then another, until the owner got frightened and removed the animals, numbering 11 donkeys and mules altogether, to a place outside the North Gate. Six days later nine mules besides the first one had died. Then three of the keepers who had been in contact with the animals were reported ill and were sent to the plague hospital, where their complaints were diagnosed to be pneumonic plague. It was here that the cause of their infection from the mules was found out. The carcass of one mule was at once examined, the organs were removed, and cultures made from the blood, heart, spleen, lungs, and liver. All showed cultures of plague bacilli. Besides the three men, six others who had been in quarantine with them died also, so that the total number of deaths from this single focus was: Men died, 9 out of 12; mules died, 10 out of 12. Only 2 out of 12 mules were now left in quarantine. These escaped the disease.

Dr. AKIRA FUJINAMI read a full and detailed account of the Morbid Anatomy of Plague Pneumonia in Manchuria, his findings differing but little from those of Dr. Strong.

On the subject of Virulence of the Bacilius a long discussion took place, the general feeling being that the organism during this epidemic attained maximum virulence, the reason for this being its passage direct from lung to lung, from man to man, but it was felt that virulence alone would not explain the recent epidemic, which no doubt to a large extent depended on overcrowding in inns and trains, &c.

Dr. D. CHRISTIE (Mukden) read a paper on the Clinical Data of Primary Plague Pneumonia and Septicæmia.

Dr. S. C. CH'UAN (China) spoke on the Diagnosis of Pneumonic Plague. There was never any initial rigor noted, and no marked characteristic symptoms, the most important factor being bacteriological examination of the sputum or blood. In the absence of these he relied on agglutination tests by means of suitable apparatus.

TENTH DAY (APRIL 14TH).

Dr. STRONG, in a discussion on Physical Diagnosis, summed up the various points, adding observations he had made with Dr. Teague, and as they have not been so fully observed before I quote them at some length. First, with regard to percussion, even in cases well advanced in the disease distinct dulness may be absent. Vocal fremitus and resonance give little information of the character of the pulmonary involvement. On auscultation râles are frequently not present, even in very sick cases; when present they are usually fine. Coarse râles, such as occur in cases of catarrhal bronchitis, are rarely heard, and had not been observed in cases uncomplicated with other micro-organisms than the plague bacillus. The numerous moist râles which are commonly encountered late in the disease are due to the marked œdema of the lungs. The character of the râles is what one would expect from the condition of the bronchi, the character of the exudate, and the condition of the lungs as observed at necropsies. Feeble respiratory sounds, tubular modification, or pure tubular respiration are the conditions most commonly found on auscultation, and not infrequently a dry pleuritic rub. The signs of cardiac involvement are always marked in advanced cases—very rapid,

feeble running pulse. Dyspnœa and galloping rhythm of the heart sounds are usually noticed, and sudden cardiac collapse is frequently observed. One cannot doubt that death occurs from intoxication and paralysis of the heart. In several cases the authors saw death occur from cardiac collapse in the attempt to move patients from one ward to another. Some of these cases occurred in patients who seemed in fairly good condition just prior to their being moved. Death also occurred from the same cause in one or two instances after the patient had sat up in bed for a few minutes to take nourishment. The bacteriological diagnosis was the only certain one, but from the general condition of the patient in connexion with the absence of marked physical signs in the lungs, the diagnosis of plague was often strongly suggested, while cases with numerous coarse bronchial râles in the lungs were usually not plague cases. Labial herpes had never been observed in any of the cases in the hospital, which was interesting on account of its frequent occurrence in croupous pneumonia. This last point had been called attention to in pneumonic plague cases that had occurred before.

On the subject of **Primary Intestinal Plague** it was the general opinion of the bacteriologists that no cases of it had been found in the recent epidemic. None of the necropsies showed serious evidence of intestinal involvement, and even though the intestines might be secondarily involved this condition must be a very rare one also. Professor KITASATO said that primary intestinal plague had never yet been proved.

The conference next resumed its deliberations in the Epidemiological Section.

Dr. G. D. GRAY (Great Britain) read a paper on the Origin of the Infection.[1] He considered the question as to whether this Manchurian outbreak arose among tarabagan trappers in that region, as a result of infection from these marmots, or whether it was an extension of the spread from other localities where pneumonic plague had already appeared. There was no evidence that the past season had been especially marked by an outbreak of tarabagan disease, any more than previous years when the trappers had been subjected to the same crowded social conditions, accompanied by privations and rigorous climate. Numerous specific instances had occurred of late showing how one sick visitor was able to lay a train of infection, causing tens or hundreds of deaths in a town or village. He went on to show that sporadic outbreaks had been occurring in Transbaikalia and in North-West Manchuria for years past, and whether the infection was regarded as spreading from west to east or *vice versâ* was comparatively immaterial, so long as it was remembered that there was here a region of endemic plague, mostly of the pneumonic variety, involving spread from man to man and able to break out in certain districts without the intervention of rodents—i.e., through human conveyance of infection. During the latter half of 1910 plague had been officially notified as occurring in Tarbagatai, Petrowsk, Verkneudinsk, Aksha, Akschinsk district, Darvolya, Chenanor, Sharasun, Akurei, Alonianaya, and Borsja, all towns in Transbaikalia. He hoped the Conference would recognise the importance of recommending frank and rapid notification between Russia and China of sporadic outbreaks, however small.

Dr. ASPLAND (China) spoke on the Spontaneous Decline of the Epidemic in certain towns, and quoted instances of certain places, notably the town of Shuang-Cheng-Fu, 60,000 inhabitants, where no attempt was made at segregation, there was no quarantining of contacts, no proper hospital for the sick, and no disinfectants used, but where the duration of the epidemic differed but slightly from that of the very best organised centres using exclusively Western scientific methods.

Dr. A. STANLEY (China) said the time the epidemic had lasted in most of the places affected appeared to have been roughly the same, independent of the sanitary measures taken, which might have lessened the number of cases of plague but had not markedly limited the duration of the epidemic. He cited the cases of Hong-Kong and Canton, where, nothwithstanding the sanitary measures taken at Hong-Kong, the incidence appeared to have declined in both places synchronously, though in Canton practically no preventive measures were taken. He thought it was necessary to get the influence of positive and negative sanitation in proper perspective, so as to be in a position to assess the actual value of sanitary work, and to be able to recommend specific sanitary measures involving an expenditure of public funds commensurate with the ultimate benefit.

On the question of infectivity of houses in which plague deaths had taken place there was much discussion, but no positive evidence was given, even though the patient had been spitting freely, for as soon as the sputum dried the bacilli died.

(To be continued.)

[1] See THE LANCET, April 29th, 1911, p. 1152.

CHOLERA IN RUSSIA AND THE NEAR EAST.

(BY THE BRITISH DELEGATE ON THE CONSTANTINOPLE BOARD OF HEALTH.)

Cholera in Russia.

IN my last letter on this subject[1] the figures for the cholera epidemic in Russia were brought down to Jan. 22nd (Old Style). In the following week no further cases were recorded, and for the succeeding three months it would seem that the entire Russian Empire was free from recognised cases of the disease. Quite recently, however, cholera is reported to have reappeared at Tanganrog, at Novorossiisk, and in the country adjoining these two ports. The can be, unfortunately, little doubt that this will prove to be but the beginning of a fresh and general revival of cholera throughout the Russian Empire. In this connexion the following facts and figures recently communicated to the Constantinople Board of Health by the Russian delegate are of interest.

Cholera has been prevalent in Russia in each of the last four years (as also in some of the preceding years), and the following figures have been officially recorded :—

Year.	Number of governments or other territorial divisions infected.	Total cases.	Total deaths.
1907	50	12,717	6,422
1908	69	30,709	15,543
1909	49	22,632	10,605
1910	72	216,091	101,002

In 1910 the regions most severely affected were the territories of the Don, and of the Kuban in the Caucasus (more than 20,000 cases in each), the governments of Samara and Ekaterinoslav (more than 15,000 cases in each), and the government of Kherson (over 10,000 cases). Then in descending order come the governments in the south of European Russia, those situated in and near the valley of the Volga, and the government (or rather the city) of St. Petersburg. The regions least affected were the Baltic Provinces and the northernly and central governments. The only regions that escaped were the Polish governments (with the exception of that of Lublin), the governments of Esthonia, Vilna, Grodno, Yeniseisk, and Irkutsk, the territories of Samarkand, Semiretchinsk and Yakutsk, and the island of Sakhalin. The epidemic reached its height in the months of July and August, as shown by the following figures :—

From May 2nd to May 29th ...	1,406	cases,	564	deaths.
,, ,, 30th ,, June 26th ...	14,355	,,	5,514	,,
,, June 27th ,, July 24th ...	72,506	,,	32,318	,,
,, July 25th ,, Aug. 21st ...	79,287	,,	37,410	,,
,, Aug. 22nd ,, Sept. 18th ...	22,654	,,	11,310	,,
,, Sept. 19th ,, Oct. 16th ...	4,456	,,	2,394	,,
,, Oct. 17th ,, Nov. 13th ...	540	,,	288	,,
,, Nov. 14th ,, Dec. 11th ...	115	,,	61	,,
,, Dec. 12th ,, ,, 25th ...	16	,,	8	,,

(All the above dates are according to the Old Style.)

A summary of the measures taken by the Russian Government to control the epileptic is also given in the communication referred to. It is there stated that a sum of 500,000 roubles has been spent on those measures. This sum is equivalent to rather more than £50,000.

Cholera in Smyrna.

The figures given in my last letter brought the record down to Feb. 12th. Two further cases of cholera occurred

[1] THE LANCET, March 25th, p 840.

in Smyrna on Feb. 22nd, and after that date the epidemic appeared to have died out. But on April 26th a fresh case was seen, and this was followed by a second case on the 27th, a third on May 3rd (a soldier in the military hospital), by two others on May 5th, and still two others on May 6th. There have thus been seven cases in all in the latest revival of the disease here. In this instance, also, there is only too much reason to fear that these cases are but the beginning of a fresh epidemic, which, favoured by the seasonal conditions, will probably spread widely in Smyrna, and from there to other parts of Asiatic and European Turkey.

Cholera in the Hedjaz and the Yemen.

No case of cholera appears to have occurred subsequently to those mentioned in my last letter. In Medina it is now known that 192 cases of cholera and 212 deaths were seen before Dec. 31st (Old Style) and 268 cases and 450 deaths during the month of January. In spite of these considerable numbers at Medina, the southern terminus (for the present) of the Hedjaz Railway, only a single group of infected pilgrims arrived at the lazaret of Tebuk, situated on that line; and no case of cholera was seen to the north of that point. The Tebuk lazaret received this year 21,583 persons, but of these 1184 were troops, so that the number of pilgrims returning by the line may be placed at 20,399. In the preceding Haj the corresponding number was 15,222, and in that of 1908–09 it was 14,126. From these figures it is clear that each year the numbers of pilgrims who choose this route to return from the Hedjaz go on increasing. In Yanbo 26 cases of cholera were registered before Dec. 31st (Old Style) and 11 in the month of January, making 37 in all.

In the Yemen cholera still persists, and its prevalence is no doubt favoured by the movements of troops in connexion with the military operations there. In Hodeidah, the principal port of the Yemen, 61 cases of the disease and 62 deaths occurred between Jan. 25th and Feb. 7th; and in the same period there were 1 case and 3 deaths in Badjel; 11 cases and 6 deaths in Menaha; 2 cases and 2 deaths in Obal; and 26 cases with 14 deaths in Zeidieh. All these places are in the interior. There then followed a period during which apparently no cases were seen. On Feb. 28th cholera reappeared in the military hospital at Hodeidah; by March 8th 26 cases with 12 deaths had occurred here. Men of different regiments arriving in Hodeidah and sent to hospital for "ordinary" diseases seem to have contracted cholera in the wards. From Hodeidah the infection has spread to Lith, a port further north, and to the island of Camaran. On March 5th a transport with 50 soldiers on board arrived at Camaran, with 1 case of the disease. On March 12th a case occurred in a native of the large village of Camaran (not far from the lazaret of that name). On April 18th cholera was still prevalent at Zeidieh, in the interior of the Yemen, and in the military hospital at Hodeidah, but no figures were furnished. On the same date it was reported (from Jeddah) that 5 cases, with 4 deaths, had occurred among the troops in the Port of Lith. On the 20th another transport arrived at Camaran with a case of cholera on board, and 6 further cases occurred in the same group. On the 21st a second case occurred in the village of Camaran. On the 28th the Turkish transport *Nedjat* arrived at the Camaran lazaret with 700 men on board, among whom no less than 30 deaths from cholera had occurred during the short voyage from Lith; and 50 cholera cases were landed in the lazaret from the same ship. The persistence of cholera in these regions is a little disquieting, particularly in view of the fact that in little more than a month the first pilgrim ships of the pilgrim season 1911-12 will be arriving at Camaran from India and the Dutch Indies.

Constantinople, May 12th.

FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE.—The second biennial congress of this association will be held at Hong-Kong from Jan. 20th to 27th, 1912. The President is Dr. J. Mitford Atkinson. The vice-presidents are Dr. W. G. Ellis, Straits Settlements; Dr. J. de Hann, Java; Dr. Victor G. Heiser, Philippine Islands; Dr. H. Campbell Highet, Siam; Dr. Neil Macleod, Shanghai; Sir Allan Perry, M.D., Ceylon; Professor G. Shibiyama, Japan; Dr. J. Staby, Tsingtau; and Professor Yersin, M.D., French Indo-China. The association is an international one formed to promote the science and art of tropical medicine in the Far East.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Tragic Death of Mr. William Daley, Medical Officer of Health of Bootle.

UNIVERSAL regret was expressed in Bootle and Liverpool at the sad death of Mr. William Daley, which occurred on May 20th as the result of an accident. Mr. Daley, his younger son, and two friends proceeded in a motor-boat to the mouth of the Ship Canal, near Eastham, to watch some aquatic sports. The motor-boat through some unknown cause broke down. Signals of distress were hoisted owing to the near approach of a large steamer which was seen to emerge from the canal on its way to the Mersey. In spite of the efforts of the captain or pilot to clear the disabled motor-boat, the steamer crashed into the latter which turned "turtle," throwing the occupants into the water. Mr. Daley, who it appeared was injured by the collision, made a brave attempt to swim to the shore, accompanied by his son. When picked up by a passing barge he was still breathing, but, in spite of the administration of artificial restoratives, he shortly afterwards succumbed. The late Mr. Daley was born in Oldham 47 years ago. He went to Bootle in 1885, having accepted a post as assistant inspector of nuisances, becoming chief inspector in 1893. With commendable assiduity he studied medicine at University College, Liverpool, and obtained the triple qualification of Edinburgh and Glasgow in 1900. In 1901 he obtained the Diploma of Public Health. When Mr. T. W. N. Barlow, the medical officer of health of Bootle, was transferred to Wallasey in 1908 Mr. Daley was appointed his successor, and it is universally acknowledged that he discharged his onerous duties with great credit. He was lecturer on hygiene and physiology at Bootle Technical School, medical superintendent of the infectious diseases hospital, and medical officer of the schools. He was also an examiner under the Sanitary Inspectors' Association, in addition to which he was honorary secretary of the local branch of the British Medical Association. Mr. Daley leaves a widow and two sons. The elder son, Dr. W. A. Daley, is resident medical officer at the Infirmary for Children, Liverpool, having recently graduated at the University of Liverpool after a student's career of much distinction. The greatest sympathy is being expressed with the bereaved family. The interment took place at Anfield on May 24th in the presence of a large concourse of mourners.

Sanitary Equipment on a Liner.

The new twin-screw steamer *Hildebrand* (7000 tons) belonging to the Booth Steamship Company, Limited, recently left Liverpool on her maiden voyage, bound for the Amazon *viâ* Spanish and Portuguese ports. With a view to reduce to a minimum the risk to passengers and crew of contracting malaria and fever while in the tropics the *Hildebrand* has been rendered practically mosquito proof. Her port-holes are protected with patent screens which lock in the port and allow the glass to be shut over them, and her ventilators

are protected by a screen placed at the bottom of the shaft. Doors are protected by removing the panels, introducing wire gauze and then replacing the panels, arranging them so that they are portable. Whenever possible a system of double doors has been adopted, thus forming a lock, so that if

mosquitoes have entered by one door they will still have to get through another before they get into the living rooms. There is a small hospital fitted with an operating table and containing aseptic hospital furniture. The floors of the hospital are of terrazzo, the walls are smooth, and there are no corners.

May 24th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Death of Dr. P. H. Maclaren.

THE death occurred on May 20th at his residence in Edinburgh of Dr. Peter Hume Maclaren, a well-known member of the medical profession in Edinburgh. Dr. Maclaren graduated as Doctor of Medicine of the University of Edinburgh in 1857. He became a Fellow of the Royal College of Surgeons of Edinburgh in 1868, and in 1898 he held office as President of his College. He was connected with the Royal Infirmary, successively as assistant surgeon, surgeon, and consulting surgeon, while for some time he was a member of the board of management of that institution; he was also at one time a manager of the Royal Hospital for Sick Children and of the Royal Edinburgh Asylum. Dr. Maclaren was a man of most genial character, of great shrewdness, and with a keen sense of humour. His fund of anecdote and the kindliness of his disposition made him one of the best of companions, while the like qualities endeared him to his patients.

Edinburgh University Court.

At a meeting of Edinburgh University Court held on May 18th Dr. W. G. Smith was reappointed Combe Lecturer on Psychology. On the recommendation of the Senatus it was resolved to institute a lectureship in Genetics, and the Court appointed Mr. A. D. Derbishire, M.A., to the office of lecturer, and approved of a course of six lectures on Heredity being given by him during the current summer session, the course to be free to all matriculated students. A letter was read from the honorary treasurer of the Chiene Portrait Fund intimating that the executive committee of the fund had resolved to hand over to the University of Edinburgh the balance of the fund, amounting to between £310 and £320, to form a fund to provide a bronze medal to be called the "Chiene Medal in Surgery." The Court resolved to accept administration of the fund.

The Royal Colleges and Precedence.

Counsel were heard by the First Division of the Court of Session on May 18th in the appeal by the Royal College of Physicians of Edinburgh against the decision of the Lyon King of Arms, finding that he had jurisdiction to try the petition in which the Royal College of Surgeons claim precedence on ceremonial occasions over the Physicians. Judgment was reserved.

Supplementary Charter for Glasgow Royal Infirmary.

The solicitors for the Glasgow Royal Infirmary have received intimation that the King has approved of the grant of a Supplementary Charter to the institution, and that the Privy Council has remitted to the Scottish Office the carrying out of the remaining formalities in connexion with the matter. In the Supplementary Charter, the terms of which were agreed to at a meeting of the qualified contributors held in November last, the chief subject dealt with is the reconstitution of the board of management. The present board consists of 35 members, and under the new scheme the total number of managers will remain the same. Several important changes are, however, provided for, including an increase of working-men representatives on the board from two to four; two representatives each to be nominated by the Senate and Court of the University in lieu of the professor of anatomy and the professor of medicine, and the representative of the "Faculty of the College of Glasgow"; one representative from the Muirhead trustees; Members of Parliament for the city to cease as *ex-officio* managers; the abolition of the right of the ministers of the Church of Scotland in Glasgow annually to elect one of their number as a manager; three representatives from the town council instead of one; and two representatives from the Faculty of Procurators of Glasgow. Other alterations have reference to the procedure and powers of the board.

Mysterious Sickness at Lamlash.

The circumstances attending a sudden and rather serious outbreak of sickness at Lamlash are being inquired into by the medical, sanitary, and police authorities of Arran. About a fortnight ago a number of people were seized with violent sickness, accompanied by vomiting and severe intestinal pains. The symptoms suggested arsenic poisoning, and this was confirmed by the post-mortem examination on a young child who died. Within a few days numerous other cases were reported, although in almost every instance the patient speedily recovered. The trouble seemed to be associated with the bread-supply of the district, and the local bakery firm at once stopped work until their ingredients and utensils could be examined by Dr. John Hunter, public analyst for Mid-Lothian, who made an exhaustive examination of the ingredients in the bakehouse and certified that they were free from arsenic. The bakery has now resumed work and no new cases have occurred for some time, but the cause of the trouble still remains a mystery, which every effort is being made to unravel.

The Milne Treatment of Scarlet Fever in Clydebank.

At the monthly meeting of the Renfrew and Clydebank hospital board a report was submitted on the Milne method of treating scarlet fever. Mr. A. D. Macfie stated that during the past three months there had been altogether 62 cases under treatment. Of these, 31 had been discharged. He had made inquiries regarding every case discharged, and they were all doing well. He believed that they sent their patients out as well in four weeks' time as they would send them out in eight weeks, and with as little risk of "return" cases. For hospital treatment the experiment had proved itself a satisfactory one, and risk of fresh infection would be minimised, and some patients might be discharged even sooner if there were double wards to work on. The board, with a view to giving the treatment as full and fair a test as possible, with ample time to follow up the cases after discharge, authorised its continuance for a longer period.

Gift to Dundee Hospital.

At a meeting of the committee of management of the Victoria Hospital, Dundee, held on May 17th, it was intimated that the cost of providing two verandahs with sliding doors to the hospital would be defrayed by two of the directors—Mr. R. B. Sharp and Mr. William Rettie. The committee cordially thanked both gentlemen for the gift. The cost of the work will be about £500.

Small-pox in Lochee.

No further cases of small-pox have declared themselves in Lochee. There have been a great many vaccinations done this week. Dr. C. Templeman, medical officer of health, in his recent annual report stated that an inquiry was made concerning the vaccinations of the children born in the city of Dundee between July 1st, 1909, and June 30th, 1910, from which it was found that only 32·9 per cent. were registered as vaccinated.

May 23rd.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

A Medical Victim of X Rays.

FRENCH science has paid toll in yet another victim to radiography. Dr. Boëtau, physician to the civil hospitals of Mans, suffered for some months from a serious burn on the hand caused by the X rays. The radiodermatitis developed into an epithelioma, which necessitated amputation of the hand, and finally extended throughout the arm. The unfortunate physician has at last succumbed after many months of suffering. This deplorable event should again impress upon the medical profession the importance of not using the X rays without taking all the protective precautions that are now beginning to be tolerably well known. The medical men of the small provincial hospitals, moreover, should consider these facts before resorting to the new methods of diagnosis and therapeutics.

Poisoning by Thallium Acetate.

The following case of poisoning is of interest on account of its great rarity. Thallium acetate, which is used in certain industries, does not appear hitherto to have caused poisoning.

A workman dissolved a gramme of thallium acetate in 200 grammes of water and put this solution into an empty Vichy water-bottle without removing the label. Suffering later from pains in the stomach, he asked for some Vichy water, and failed to observe that his wife took it out of this bottle, adding it to a glass of milk which he was about to take. The next morning he was seized with vomiting and an acute sense of internal chill. There were cyanosis of the extremities, a lowered temperature, pains in the kidneys, and some cramp of the stomach. The urine, much reduced in quantity, contained a little albumin. His medical man ordered abundant drinks and baths, and the symptoms disappeared in a few days. This observation seems to show that thallium acetate does not possess the properties that are attributed to it in treatises on pharmacology—namely, the arresting of perspiration and the loss of hair. Nothing of this kind occurred in the case cited. On the other hand, the drug appears to be by no means innocuous to the kidneys.

The Diminution in the French Birth-rate.

The *Journal Officiel* has just published the French vital statistics for 1910. The most striking fact is that the excess of births over deaths is only 70,581, as against 84,061 in the previous year. In England and Austria-Hungary the excess is about 500,000. This result is a consequence of the extraordinary fall in the births, which have dropped from 1,000,018 in 1859 to 984,000 in 1868, 899,000 in 1887, and 774,358 in 1910. If the total population remains stationary it is because the death-rate also has considerably diminished. The actual figures are 703,777, the lowest ever observed. But Dr. Bertillon, the celebrated statistician, justly remarks that this result is due partly to the diminution in births, since it is the infants that furnish the largest part of the mortality statistics. Thanks to the progress of hygiene and of care for the children, infant mortality has fallen from 14 per cent. in 1906 to 12 per cent. at the present time.

Pseudo-Religious Pharmaceutical Specialities.

The fertility of the imagination in everything relating to advertisement that is displayed by the manufacturers of pharmaceutical products is inexhaustible. In France a procedure to attract the public that has been successfully employed consists in putting the product under religious patronage. In the advertisements carried by the political journals there are a great number of powders, pills, syrups, &c., announced as prepared in accordance with some secret formula furnished by an old priest, a former missionary, or some religious person. This mode of advertising is always very successful among pious persons. It would seem as though it were a survival of the ancient belief, dating from the age in which the priest and the physician were one. Very frequently the advertisement states that the product, prepared according to the sacred formula, is manufactured by a druggist and sold by him in conformity with the law. But a Parisian manufacturer has found something better still. He has announced, by means of circulars widely distributed from house to house, a marvellous product prepared by a holy priest, who gives his address and furnishes his photograph. In consequence of the numerous complaints laid by his dupes the police made a raid at the address given, and found simply a room hired in the priest's name, to which an employee of a neighbouring pharmacy came daily to receive the letters of the clients. The unscrupulous tradesman will be prosecuted, and, at the request of the Syndicate of Druggists, prosecutions also will be instituted against others engaged in this nefarious kind of advertising.

The Reform of Medical Studies.

The organisation of medical studies in France continues to be subjected to much criticism. The professors of the Faculty themselves are suggesting projects of reform. Professor Lannelongue is the author of a project which would entirely separate examination from teaching, as is done abroad. In France the examinations are undertaken before the professors and assistant professors. This arrangement gives rise to many inconveniences, for it takes up much time from the professors, who are compelled to devote to it two hours three times a week during nearly the whole year at the Faculty of Paris. It would seem better that this time should be devoted to their scientific work or to preparation for their teaching. Again, many professors run a risk of becoming unconsciously partial in requiring from students whom they examine an acquaintance with their own personal views that they have propounded in their teaching courses, and these are so numerous that it is impossible for any student to follow them all. Another reform, advocated by many members of the Academy of Medicine, after an interesting communication from Professor Mortais of Angers, consists in encouraging as much as possible the stay of the students during the first year of their studies, in the secondary medical schools, which are numerous in the provinces. In these schools the students would not encounter the distractions that are found in the great cities in which are situated the principal faculties. Their masters would be able more easily to give them individual attention and to train them gradually in the practical methods of examining the sick, which the professors of the faculties surrounded by a great number of students cannot possibly do, and consequently leave to their assistants.

May 22nd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

The Austrian Tuberculosis Congress.

AFTER a prolonged period of preparatory work the first Austrian Congress on Tuberculosis was opened about a fortnight ago in this city, and it is hoped that one of its results will be a change in the attitude which the Government has hitherto maintained with respect to the tuberculosis question. Up to the present time whatever has been done in this country for the prophylaxis or institutional treatment of this disease has been the outcome of private or humanitarian charitable endeavours, for the Government seems never to have felt itself under any obligation to do more than render occasional financial assistance to existing institutions, although the number of deaths due to tuberculosis is very high in Austria. In the opening paper, read on the first day of the Congress, Dr. Lausch, an Austrian count, enumerated the institutions available for the treatment of tuberculous patients. He said that there were only six sanatoriums devoted to this purpose, and that none of them were State-supported, all being under the control of private individuals; five of them received paying patients and one was a charitable institution supported by voluntary contributions (in Alland). In seven hospitals there were pavilions for tuberculous patients, and in six health resorts there were also pavilions for the open-air treatment of pulmonary tuberculosis, but there was in Austria only one institution reserved for surgical tuberculosis—namely, one for cases of lupus ("Lupusheim" in Vienna). In eight seaside resorts there were hospitals for children suffering from this disease, and five other places situated in the country have erected similar institutions. Within the last few years, however, the Government has taken adequate measures for dealing with cases of tuberculosis among that section of the population which is employed in the public service or is otherwise under State control, and in this way it has come about that all cases of tuberculosis in the prisons, in the tobacco factories (which in Austria are managed by the Government), and among the staff of the Post-office and the State railways are to be notified, and if possible isolated. Similar precautions have been ordered for the army and navy. Criticism of the details of the new arrangements must be deferred until some experience of their working has been obtained. In another paper Dr. Hamburger stated that investigations which he has made seemed to show that infection with tuberculous disease took place in the overwhelming majority of cases, at least in Vienna, during childhood, and that the respiratory tract was the portal of infection. He therefore argued that infection was to be prevented not so much by working for the recovery of patients suffering from mild forms of the disease as by rendering advanced cases harmless to their neighbours, and for this purpose he recommended the establishment of special tuberculosis homes, like asylums for mentally afflicted persons. It might be added that in Vienna, where the proportion of tuberculous patients was decidedly above the average, there were no more than 400 beds available for this purpose. Professor Chiari, however, maintained that the tonsils and adenoids (the lymphatic ring) were the chief portal of infection. Interesting papers were also read by the chief medical officers of the three large sick clubs or "Krankencassen." In Austria a widely ramifying system of insurance against sickness and invalidity has been compulsory

for 20 years past, and the scope of this was going to be extended still further, so as to comprise fully 30 per cent. of the entire population. The readers of the papers in question were Dr. Schiff, chief medical officer of a club having among its members some 320,000 labourers; Dr. Czech, chief medical officer of the sick club for mercantile clerks; and Dr. Fried, the holder of a similar position in another organisation. Dr. Schiff showed that fully 23 per cent. of the total number of days during which patients received sick pay were assignable to cases of tuberculosis; this was equivalent to 11 per cent. of all patients, demonstrating that the tuberculous patient was laid up twice as long as any other. More than 1,500,000 kronen (£65,000) were paid out of the funds under this heading. More than 12,000 members were sent last year to the convalescent homes belonging to the clubs in order that they might recuperate from recent attacks of apicitis. Dr. Czech said that he had organised a "Central Institute for Tuberculosis" amongst the members of the club with which he was connected, and three medical men in the club's own hospital (the Merchants' Hospital, a well-managed and up-to-date institution in Vienna) had to examine every patient very closely, X rays and bacteriological methods being employed in each case. From this central board the necessary information was supplied to 60 district medical officers who had to keep each suspected or manifest case under constant observation and every half year to deliver a report on the condition of the patients, including their medical and social environments. Incurable cases were received in the special hospital of the club. In this way 34,000 members were kept under careful observation in order to detect any sign of disease. An instructive paper outlining a scheme for an antituberculous organisation to extend throughout the whole country, and to be put in force by the united local tuberculosis committees, was read by Dr. Reisinger, of the Prague health department. He emphasised the fact that rural districts suffered from this disease as much as, if not more than, industrial or town districts. There ought, therefore, to be an active campaign against tuberculosis in the country because the country population supplied the population of the towns. In each large village or principal centre of a rural district there ought to be an institute for the diagnosis of cases where the district medical officer, the vicar, and the mayor of the place should be able both to apply for information and also to report any facts of interest in this connexion which might have become known to them. The control of suspected cases could be undertaken by the local committee. The local institute, in addition to making diagnoses, could distribute disinfectants and attend to prophylactic and hygienic measures; it could also exercise supervision over the milk-supply and the sanitation of cowhouses, and in this way could discover tuberculous animals which might then be got rid of. A natural corollary to this scheme would be the appointment of tuberculosis inspectors, analogous to the pellagra inspectors and malaria inspectors in Southern Austria. A sum of £100,000 was already in hand, and further grants have been promised by the Government for this purpose.

May 21st.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Cholera Epidemic.

THE news of the outbreak of cholera in Russia and Smyrna causes much anxiety at Constantinople. It is feared that it will almost be impossible to prevent the terrible scourge spreading to the metropolis. A day or two ago a suspicious case occurred at Stamboul. A man was taken suddenly ill and showed a number of symptoms quite characteristic of cholera, such as violent vomiting, diarrhœa, cyanosis, and collapse. The man died and the news soon spread in the city that cholera had again made its appearance. I am informed, however, on good authority which this case was not cholera, and that the man succumbed in consequence of large quantities of ice-cream which he had been eating the previous evening. Active precautions are being taken everywhere, and the sanitary as well as the municipal authorities are developing laudable vigilance and circumspection. There are, however, quite a large number of people who think that the epidemic must inevitably reappear in Constantinople, as it had never been properly stamped out. The germs were merely dormant during the exceptionally cold winter months, and now, with the hot summer weather, their virulence must needs revive with double force. I hope this prophecy will prove false, although I cannot help remembering the fact that the reappearance of cholera has invariably taken place in Constantinople in spring and summer after an epidemic in the autumn. The news of the spread of cholera in Southern Russia is rather alarming. I understand that several districts are completely infected. In Smyrna, too, the epidemic seems to increase in intensity. Nine deaths have been reported lately. It is difficult, however, to gather exact information, as the medical authorities seem reluctant to tell the truth, in order not to alarm the population of the metropolis unduly.

First Aid Association.

A First Aid Association has been formed at Constantinople, and has already begun its useful work. The president of the Budapest Volunteer Salvage Society, Count Karotzonyi, has offered to the Ottoman Government a number of sanitary appliances, in order properly to inaugurate the activities of the new association. Four civil medical men have been attached to it. Of this number two will be constantly present at the fire brigade barracks of Taxim, to be always within easy reach in cases of emergency or accident. General Sczechenyi Pasha, the director of the fire brigade, has sent a memorandum to the Ministry of War and the municipality of Pera, in which he points out the advisability of appointing military medical men for the service of the First Aid Association. A sanitary carriage will be at the disposal of such people as meet with an accident. A short message to the Taxim barracks will suffice to bring the vehicle, which can be used free of charge. A number of sanitary carriages will be acquired later and the services extended, by degrees, to all quarters of the metropolis. In this way an institution of great usefulness will be permanently established in Constantinople. The want of it has long been keenly felt.

The Lazarets.

I understand that the revenues from the lazarets show a surplus of over £T400,000 over the expenditure. It has therefore been decided to employ the sum of £T150,000 for the construction of sanitary establishments of a modern type in different localities. I am told that it has also been decided to reduce sanitary taxes by 20 per cent.

Small-pox in Pera.

An epidemic of small-pox has broken out in some parts of the European quarter, Pera. A circular announcing the fact has been communicated by the medical authorities to the local newspapers, and measures are being taken to prevent the disease spreading. The municipality has appointed special medical men for gratuitous vaccination, and the population is asked not to put any difficulties in their way. It is not unlikely, however, that the vaccinators will be hampered in their work, especially in some quarters, where the lower classes look with suspicion upon every free measure of the sanitary authorities.

Want of Water in Pera.

The poorer classes of the Pera population are suffering from the want of water for drinking purposes. A number of street fountains have been pulled down in order to enlarge the thoroughfares. People who used to get good drinking water from these fountains free of charge have now to rely completely upon the services of the so-called "sakkas" or water-carriers, who charge elevated prices for each leather bag of water, as they have to bring it from rather long distances. The fountains near the tunnel, at Galata-Serai, at Taxim, and other places, have ceased to exist. I am informed that the municipality is considering what measures should be taken in order to supply the want.

May 19th.

PRESENTATION TO A MEDICAL MAN.—At the last meeting of the Ottery St. Mary (Devon) urban district council the chairman, on behalf of the members and officers of the council, presented Mr. Francis Mortimer Reynolds, M.B., C.M. Edin., with a handsome claret jug, suitably inscribed, as a mark of respect and esteem, on the occasion of his resigning the post of medical officer of health, after 18 years' service.

UNITED STATES OF AMERICA.

(FROM OUR OWN CORRESPONDENTS.)

Rabies in the United States.

SOME alarm has been aroused in New York by the large number of dogs, presumably stray dogs, that roam the streets. The head of the New York Health Department, Dr. Lederle, has recently informed officers of the Society for the Prevention of Cruelty to Animals that so many complaints had come to the Health Department with regard to the dog nuisance that unless it should be shown that the society could cope with the situation the Health Department would begin a crusade of extermination. This would mean that the dogs would be shot by policemen, but such a course would not be pursued except as a last resort. The reason why there have been so many complaints concerning stray dogs is the fear of rabies by the general public. Rabies has been prevalent to a greater or less extent in New York State during the past three years. In that part of Ontario, too, contiguous to New York State, an epidemic of rabies broke out last year. The disease is said to have been brought into Canada by an infected dog from New York State by way of Niagara. In the *Forum* for April last Dr. F. C. Walsh writes with respect to rabies in the United States. The incomplete records of New York State show that during the past three years there were bitten by supposedly mad dogs 105 persons, of which number 12 died; 10 horses, of which number 5 died; 68 cattle, of which 38 died; and 11 swine, of which 10 died. In the State of Indiana since 1906 there have been bitten by mad dogs 165 persons and a large number of cattle and other farm stock. Of course, although the infection may be, and is occasionally, spread by other animals, the dog is the chief factor in the dissemination of rabies. Walsh points out that if we can rid the dog of rabies the greatest source of danger to the human being is for ever removed. Indeed, the whole problem is not a medical but a sociological one. The remedy proposed by Walsh is that every dog without an owner, every stray dog, and every unmuzzled dog, regardless of ownership, must be taken and painlessly killed, not merely during the summer months but during the winter months also. He proposes another precaution against the spread of rabies —that is, the enactment of a law making the owner criminally responsible for any overt act on the part of his dog, especially when that dog develops rabies. This would have the effect of making the owner exceedingly careful either to have the dog muzzled or to take steps whereby the animal would not be a public menace. The manner in which rabies was extirpated in, or abolished from, England is held as an example to the United States. It has been shown that this can be done, and the advice is given to the authorities in the United States to follow the lead of England and Ontario.

Sterilisation of Criminals in the United States.

An experiment, which has been productive of much discussion, adverse and otherwise, has just been undertaken in the State of New Jersey. A Bill has been passed in that State authorising the sterilisation of certain classes of criminals and defectives upon the ground that "heredity plays a most important part in the transmission of crime, idiocy, and imbecility." New Jersey, however, is not the first State of the United States to authorise a Bill of this description. Four years ago the Indiana Legislature passed a similar law, and it appears that vasectomy has already been practised on a somewhat considerable scale in Indiana.

Food Protection in New York in the Summer Months.

The following order has been promulgated recently in New York. The Commissioner of Health of New York has requested the assistance of the police department in the enforcement of the provisions contained in Sections 45 and 46 of the Sanitary Code, which read thus:—

(a) The following are prohibited from being displayed for sale outside of any premises, or in any street or public place, unless covered so as to be protected from dirt, flies, and other contaminations: (1) Pastry, bread, pies, rolls, cake; (2) sliced fresh fruit; (3) dried or preserved fruits, and fresh fruits, including plums, berries, and grapes. (b) The following shall not be hung or exposed for sale in any street, or outside of any shop or store or in the open windows and doorways thereof: meat, poultry, game (except rabbits), fish. (c) The body of any animal or any part thereof used for human food shall not be carted or carried through the street unless covered so as to be protected from dust and dirt.

Health Problem Cartoons.

The American Medical Association has opened recently a cartoon contest in order to promote interest in sanitation, medicine, and surgery in connexion with the annual meeting of the association in Los Angeles on June 27th. A money prize of $200 (£40) is offered for the best series of six cartoons dealing with any or all of the following health problems: (*a*) Insects in the causation of disease; (*b*) beneficent effects of vivisection; and (*c*) pure food and adulterated or contaminated foodstuffs.

Infantile Paralysis.

At the recent meeting of the American National Academy of Sciences in Washington a paper by Dr. Simon Flexner was read on Infantile Paralysis and its Mode of Transmission. This disease, in from 5 to 10 per cent. of the cases, is followed by permanent paralysis, and in 75 per cent. by crippling. In the first epidemic in 1907 there were 2500 cases in and about New York city. No State has escaped the ravages of the disease, and Dr. Flexner estimates the number of cases which have occurred in the United States at 20,000 and the number of cripples therefrom at from 10,000 to 15,000. It was stated that the disease may be spread by contact with an infected person, and can also be carried by healthy persons. No cure is known, so that only prevention is possible. The summer months are those of its greatest prevalence.

Changes in Bodily Form of Descendants of Immigrants to the United States.

Dr. Franz Boas, of Columbia University, read a paper at the recent meeting of the National Academy of Sciences in Washington on the Changes in Bodily Form of Descendants of Immigrants to the United States. He said that in order to investigate the hereditary stability or plasticity of human types as affected by environment it was necessary to consider that the growth of various organs goes on for different periods. For instance, measurements of the skeleton made after the nineteenth year in males and the sixteenth year in females do not greatly change, but environment may affect the weight until a later period. This may affect the stature in males until the fifteenth year and in females until the thirteenth year. American environment does not affect the growth of the head after two years of age. As a matter of fact, taking the proper characteristics for measurement, it is found that the American environment produces a marked effect, even changing the shape of the face. This effect is probably due to better nutrition and in part to the smaller prevalence of children's diseases.

Proposed Tax on Patent Medicines.

A Bill has been introduced recently into the United States House of Representatives by which it is proposed to place a stamp tax of one-eighth of a cent. on every five cents (2½*d.*) worth of proprietary medicines, cosmetics, and similar articles prepared under secret or privately owned formulæ.

Typhus Fever in Juarez.

It was announced in the New York lay journals of May 12th that typhus fever had broken out among the wounded Mexicans in the hospital at Juarez. It was stated that the condition of the hospital was filthy in the extreme, and a spread of the disease was feared. Steps were being taken by the insurgents to isolate every member of the Mexican Federal Command until it had been ascertained if there were any more cases.

May 13th.

NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

Plague.

Dr. J. A. Turner, executive health officer, Bombay, has addressed a letter to the press calling attention to the increase of plague in this city. He says that there is every indication that the plague epidemic in Bombay this season will be more severe than in the past two years. Without taking an alarmist view, he thinks it necessary to warn the public of the situation and ask for their coöperation. Free inoculation against plague is provided at ten dispensaries,

where it is administered by duly qualified and specially instructed medical men. Facilities are also given for inoculation to be performed at private houses, provided there are not less than 12 persons at a time to be operated on. Ladies who wish to be inoculated, or who can induce the wives of mill-hands and others, can have special arrangements made for them. Whilst plague is so prevalent in many parts of the United Provinces, it is encouraging to find in many places that Indians of local influence are coöperating with the Government in the measures for its prevention. The writing of leaflets explaining the best measures to take in plague cases and in order to prevent cases occurring is one of the various means adopted. Mr. Moni Mohan Bos, honorary magistrate and vice-chairman of the municipal board at Allahabad, is the author of a number of these leaflets, and of the latest of them we have received a copy in English. The leaflets are written in the simplest possible way and Urdu and Hindi verses have been widely circulated by Mr. Moni Mohan Bos. He makes his appeal to the people as effectively as possible by homely illustrations. His latest leaflet is wound up as follows: "When small-pox vaccination was introduced for your benefit you revolted and concealed your children. Now that you have seen the benefits you willingly bring your children to be vaccinated. Plague *tica* is a similar thing introduced for your benefit by the Government. Your superstition and fear will disappear some day, but not perhaps till you have paid heavy toll for your folly."

New Hospital at Rangoon.

The new General Hospital was formally opened by Sir Harvey Adamson on April 4th in the presence of a large and representative assembly of Europeans and Burmans. The complete project sanctioned in 1904 was estimated to cost 27 lakhs, which has been exceeded by several lakhs. Work was started in March, 1905, and was only completed a few months ago. The hospital comprises 26 buildings. The site contains an area of some 32 acres, and there is accommodation for an assistant matron, six nursing sisters, and 44 nurses. All the sanitary fittings are of the most modern type, several being especially designed for this work. Quarters are also provided for a house surgeon, a superintendent and assistant surgeons, and four other subordinates. The lighting installation comprises 2500 lamps of various candle-power. Some idea of the magnitude of the electrical and central heating systems may be gathered from the fact that six miles of pipes for steam and hot-water, 14 miles of electrical conduit, and 64 miles of wiring are laid down. The main building is three-storeyed throughout and consists of four blocks. It is 800 feet long. There are altogether some 443 beds, which in case of necessity can be increased to 480. These cost Rs.4,07,200. Although the cost has undoubtedly been large it is justified, for the province now possesses in the new hospital what is probably the largest and most perfectly equipped institution of its kind in the East.

The Far Eastern Association of Tropical Medicine.

It is announced that the Second Biennial Congress of the Far Eastern Association of Tropical Medicine will be held in Hong-Kong from Jan. 20th to 27th next year. The association is an international one and was formed to promote the science and art of tropical medicine in the Far East. The first day of the session, Jan. 20th, will be devoted to the reception of official delegates and visitors, leaving the whole of the following week for the scientific work of the congress. Arrangements are already well in hand, and a committee, consisting of Colonel W. G. Bedford, C.M.G., R.A.M.C., P.M.O. (chairman), Deputy Inspector-General J. L. Barrington, R.N., Dr. Charles Forsyth, Dr. Oskar Müller, and Dr. F. Osmund Stodman, will classify the papers which are offered, so as to give, as far as possible, a day to each of the subjects.

The St. John Ambulance Association.

Her Highness the Begum of Bhopal has just established a centre of the St. John Ambulance Association in her state. Her Highness is herself the first president of the centre and has appointed her son, the Commander-in-Chief of the State Forces, to be vice-president, and the judicial and revenue Ministers to be members of the committee. Captain J. Fleming, I.M.S., the State surgeon, has been entrusted with the post of honorary secretary.

May 6th.

Obituary.

ISIDORE BERNADOTTE LYON, M.R.C.S. ENG., L.S.A., C.I.E.,

BRIGADE-SURGEON-LIEUTENANT-COLONEL, I.M.S.

WE regret to record the death on April 27th, at his residence in Sutherland-avenue, London, of Brigade-Surgeon-Lieutenant-Colonel Isidore Bernadotte Lyon, C.I.E., late of the Indian Medical Service, in his 72nd year.

Born in Edinburgh, he was educated at Edinburgh High School and at University College, London, where he had a distinguished career, being medallist in four subjects, and Atkinson Morley Scholar. He joined the Medical Service in Bombay in 1865, and was appointed less than two years afterwards Professor of Grant Medical College, both in anatomy and chemistry, his aptitude in the latter field of study leading to his selection at the same time as chemical analyser to the Bombay Government. He held this position for nearly a quarter of a century, combining with it the professorship of medical jurisprudence at Elphinstone College. He wrote a text-book on Medical Jurisprudence, of which several editions have since appeared. He was the author of "Food Tables for India" (1877), and of various official technical reports. Lieutenant-Colonel Lyon was for a time physician at the Jamsetjee Jeejeebhoy Hospital; he was Dean in Medicine of the University of Bombay in 1888, was created C.I.E. in the following year, and retired from the Service in 1892. He was a Fellow both of the Chemical Society and of the Institute of Chemistry.

To Sir George Birdwood we are indebted for the following sketch of Lieutenant-Colonel Lyon's work and character: "I can bear authoritative testimony to Lieutenant-Colonel Lyon's professional efficiency and high reputation among his official colleagues, as also to his attractive character, and the affection in which he was held in Bombay. He came out to India four years before I left and was almost at once appointed to Grant Medical College, Bombay, where he was in succession professor of anatomy, professor of chemistry, and professor of medical jurisprudence. He was appointed Dean of the Faculty of Medicine, Bombay University, in 1888. He was a distinguished chemist, and for his work as chemical analyser to the Government of Bombay was admitted in 1889 to the honour of the Companionship of the Most Eminent Order of the Indian Empire. He was a most accomplished lecturer, and especially deft in carrying out the experiments illustrating his chemical lectures. In this he always recalled to me George Wilson, the Extra-mural Lecturer on Chemistry, Edinburgh, and Dr. Giraud, who preceded Lyon in the chair of chemistry, Bombay. Lieutenant-Colonel Lyon was a man of strong understanding, sound judgment, and good counsel; a man on whose advice the Government could always absolutely rely, and withal of unfailing industry and untiring energy; always getting through his duties, however overwhelming, with the steadiness and punctuality of clockwork, and the impressive certainty of fate. Then, to crown all, there was his hearty sociability which made him a great personal success in Bombay, and equally with English people, including Scotch and Irish, and the people of India—Parsis, Moslems, and Hindoos. No one was more respected by them, and no one more beloved. This is my estimate of Lyon, and it would be supported by all who knew him. I only regret that I cannot fill it in more detail. He had one fault—that fault in a public man—in being utterly deficient of ambition. He was so absorbed in his duties, and so completely found his reward in the discharge of them, that he never thought either of the due recognition of his work in the sordid way of pay and pension, or in the way of honorific distinctions. While it is impossible to do anything material for a man without ability, ability, however marked, will do little out of the routine for anyone unless he has the particular knack to push his own claims or the luck to possess friends with the gift of pushfulness to assert them for him. However, the default in Lyon, as he had no family to follow after him (he never married), did no harm to anyone but himself, and will be readily forgiven him by those who knew him, and found in his utter disregard of self an added attraction to his mental gifts and most lovable moral qualities."

EDWARD MILLS GRACE, L.R.C.P. EDIN., M.R.C.S. ENG., L.S.A.,

CORONER FOR LOWER DIVISION OF GLOUCESTERSHIRE.

Mr. Edward Mills Grace died at his residence, Park House, Thornbury, Gloucestershire, from cerebral hæmorrhage, on May 20th, in his seventieth year. The deceased was born at Downend, near Bristol, where his father, Mr. Henry Mills Grace, practised as a surgeon for many years. E. M. Grace and his four brothers were all educated for the medical profession. Mr. E. M. Grace studied at the Bristol Medical School, and in 1865 he qualified M.R.C.S. Eng. and L.R.C.P. of Edinburgh; the year following he obtained the L.S.A. Mr. Grace shortly afterwards commenced practice at Thornbury, where he soon became very popular, and took an important part in the life of the little country town. For the past 40 years he had been coroner for the Lower Division of Gloucestershire; he was also for many years district medical officer for the Thornbury board of guardians, a member of the parish council, chairman of the Thornbury School Board, and until about two years ago was registrar of births and deaths for the district. As a cricketer E. M. Grace took, of course, a prominent position. He was devoted to the game, and at one period of his life was considered the finest and most dangerous bat in the country. First one and then another of his brothers became better batsmen, but he maintained his right until 1880 to be chosen to represent England, while he will always be remembered as one of the finest points ever seen on the field. He was for 39 years secretary of the Gloucestershire County Cricket Club, and on his resignation in 1909 was presented by the Duke of Beaufort on behalf of the subscribers with a cheque for £600. Mr. Grace was a fearless rider to hounds, and his vitality even in recent years was quite amazing, for only last summer he was playing for the Thornbury Cricket Club in about 40 matches. He was a skilful medical practitioner, and will be greatly missed throughout Gloucestershire, for he was held in the highest esteem by the whole county. He will also be always remembered as one of the finest of cricketers. Mr. Grace was four times married, and leaves a widow, five sons, and four daughters.

EDWARD BROOKING CORNISH WALKER, M.D., C.M. EDIN.

THE death occurred at Tiverton, on May 14th, of Mr. E. B. C. Walker, at the age of 53 years, who for many years was connected with the Asylum at Haywards Heath, Sussex. During his term of office as assistant medical officer he saw its transition from a Sussex county asylum to the Asylum for East Sussex and Brighton and then, on the completion of the East Sussex Asylum at Hellingly, to the Brighton County Borough Asylum. He was assistant to Dr. C. E. Saunders, and on the decease of that gentleman succeeded him as medical superintendent. Failing health, however, compelled him to resign that position last year, since when he had resided at Tiverton. He took the degrees of M.D. and C.M. in Edinburgh, and before going into Sussex was for some time clinical assistant at the West Riding Asylum at Wakefield.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Albert Villaret, the well-known author of an important Dictionary of Medical Science. He was surgeon-general in the Prussian army. He also wrote an account of the work of the Red Cross Societies during the Franco-German war. His death took place in Eisenach.—Dr. Heinrich Braun, professor of surgery in the University of Göttingen, from apoplexy. He had previously held the surgical chairs in Jena, Marburg, and Königsberg. His published papers dealt mainly with abdominal surgery, but he also wrote a good deal on other surgical topics. He was 64 years of age.—Dr. v. Cauwenberghe, professor of midwifery and gynæcology in the University of Ghent, in consequence of an accident.—Dr. Eduard Lent, professor in the Cologne Medical Academy, an institution which he helped to found. He was president of the Rhineland Medical Society and was always willing to take an active part in promoting the interests of his medical brethren.—Dr. Max Pius Roth, a well-known Bavarian authority on hygienic subjects.—Dr. Karl Hennig, extraordinary professor of midwifery and gynæcology in the University of Leipsic.—Dr. Max Eisenberg, formerly assistant to professor Ernst Schweninger. He enjoyed a large practice in Berlin, where he was much esteemed as an authority on diet.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

TUESDAY, MAY 23RD.

THE General Council of Medical Education and Registration commenced its summer session at its offices, 299, Oxford-street, W., to-day, Sir DONALD MACALISTER, K.C.B., the President, being in the chair.

New Members.

Sir ARTHUR GERALD CHANCE took his seat at the Council as the representative of the Royal College of Surgeons in Ireland for 11 months from March 1st, 1911. He was introduced by Sir JOHN MOORE.

Sir FRANCIS HENRY CHAMPNEYS, Bart., also took his seat as Crown nominee for England for a term of five years from May 23rd, 1911. Dr. NORMAN MOORE introduced him.

Dr. JAMES ALEXANDER MACDONALD, who has been elected a Direct Representative for England for five years from May 18th, 1911, also took his seat. He was introduced by Dr. LANGLEY BROWNE.

The President's Address.

Sir DONALD MACALISTER then delivered his presidential address. He said: In assembling for our ninety-third session, we miss from their accustomed places three members of the Council who were with us last year. Dr. Leonard McManus, one of the three representatives elected in 1906 by the practitioners resident in England and Wales, has been removed by untimely death in the midst of his career of active usefulness. He possessed in a high degree the confidence of his fellow-citizens and of his professional brethren in London, and the public tributes that have been paid to his memory testify to the faithfulness with which he fulfilled the trusts he undertook. His colleagues in the Council, who had many opportunities of appreciating his loyal nature and his practical good sense, will share in the widespread regret for his loss, and will approve the expression of sympathy with his bereaved family which I ventured to offer in their name. Sir Thomas Myles, appointed in 1905 by the Royal College of Surgeons in Ireland, has on account of other pressing claims resigned his place on the Council. By his service on several important committees, and by his ready and opportune contributions to our debates, he maintained the tradition of efficiency and geniality which we have come to associate with Members from his college and country. In parting with Sir John Williams as one of the Crown members for England the Council will have cause to realise afresh the advantages it has derived, during the past ten years, from his great knowledge and influence in all that relates to obstetrical science and practice. Our sense of responsibility in regard to a whole department of medical education, and in regard to the administration of the Midwives Act, has been lightened by the consciousness that we could always rely on his sagacious counsel and coöperation. In the room of these colleagues, who have so well merited our gratitude, three others have been appointed whose eminent services elsewhere assure them of a welcome in this Council. Dr. J. A. Macdonald of Taunton has been chosen as one of the Direct Representatives for England. He has filled with acceptance more than one important position in connexion with the British Medical Association, and has given many proofs of his capacity for business and his grasp of current professional questions. Sir Arthur Chance, past President of the Royal College, is recognised as a leader among the surgeons of Ireland. Like Sir Thomas Myles, he has already given valued assistance to the Council by acting as one of its examiners at the Apothecaries' Hall of Dublin. We now count on his help in a wider field of action. Sir Francis Champneys, who has been appointed by His Majesty in Council to take the place of Sir John Williams, is eminent in the same department of practice, and as chairman of the Central Midwives Board has guided that body with notable ability and discretion through its difficult initial stages. The Council may well congratulate itself on the accession of influence and of strength for its work, both general and special, which the appointment of these new members ensures to it. One old member, Dr. Leonard Kidd, returns to the Council for a further term,

having been re-elected without opposition as the representative of the registered practitioners of Ireland. The rare compliment thus paid him by that constituency will be endorsed without surprise by his colleagues of the Council.

The circumstances of the elections in England and Ireland have forced on our notice certain serious inconveniences arising from the provisions of the Medical Acts. The time allowed (21 days) for the preparation, issue, return, and counting of voting papers is so short that much of the work has to be arranged for, and most of the necessary expense has to be incurred, before the last day for receiving or withdrawing nominations. When, after all, no contest takes place, this expenditure of labour and money proves to be needless. If 30 days were allowed instead of 21, the waste could be avoided. Again, the Medical Act (1886) directs that a member elected to fill a casual vacancy shall hold office, not for the remainder of his predecessor's term, but for the full term of five years. The result may ere long be that in England, instead of a general election of four members taking place every five years, we may have a series of single elections taking place at much shorter intervals. As the expense of a single election is about the same as that of a general election, this result would involve a heavy additional drain on the Council's funds without any clear advantage to the constituency or the Council. If an opportunity should arise for obtaining a slight amendment of the Medical Act (1886), I suggest that attention might profitably be given to these and other points of detail, which our experience has shown to be of some practical importance for the economical administration of our resources.

Certain proposals for fresh legislation, which have already been under consideration by the Council, have made but little progress since the last session. Your views on the draft Bill for regulating the administration of anæsthetics were duly communicated to the Lord President. I am informed that they are now before the Home Secretary, with whose department it lies to initiate legislation on the subject, should the Government decide on that course. The opinions of the licensing bodies on the proposal that the Council should be empowered by law to register the Diploma in Tropical Medicine, as an additional qualification, were in accordance with your resolution obtained by the Executive Committee, and forwarded to the Privy Council Office for its information. They were accompanied by a request from the Apothecaries' Society of London that, in framing the necessary amendment of the Medical Act, the Privy Council should include a provision authorising the Society to confer similar diplomas on candidates who had duly passed its examinations. The Executive Committee see no objection to this extension of the Society's powers as a licensing body, provided the arrangements set forth in Section 5 of the Medical Act (1886) are made applicable to its examinations for the diplomas in question as well as to its qualifying examinations.

A measure providing for the registration of nurses was on Feb. 27th introduced in the House of Commons as a private Member's Bill, and it has since been printed. The Bill proposes to create a General Council for the United Kingdom, whose duties shall include the framing of rules for "regulating and supervising and restricting within due limits the practice of registered nurses." Such rules are to be subject to the approval of the Privy Council; but no provision (such as exists in the Midwives Act) is made to ensure that the rules, before being approved, shall be submitted to this Council for consideration. The Council has already informed the Lord President that it regards such a provision as necessary, in view of the conditions and responsibilities of medical practice. On calling the attention of the authorities to the above-mentioned omission, I was informed that, should the Bill be proceeded with, steps would be taken, in accordance with the terms of the Privy Council's communication of March 18th, 1910, to procure the insertion of a suitable amendment on the lines of that proposed for the new Midwives Bill. We have received from the Privy Council certain amended rules framed by authority of the Central Midwives Board. In accordance with the Midwives Act these will be submitted to the English Branch Council, of which Sir Francis Champneys is now a member. Another Bill is before the House of Commons for the amendment of the Veterinary Surgeons Act (1881), which is not without interest for those who exercise their profession for the relief of human suffering. Its preamble states, first, that "the profession of veterinary surgeons is not protected from unqualified persons practising as such under the cover of registration under the Joint Stock Companies Acts," and secondly, that "it is desirable to provide further funds for the Royal College of Veterinary Surgeons to enable it to conduct examinations, prosecutions, and inquiries authorised by statute," &c. The Bill accordingly provides that "an offence under the Veterinary Surgeons Acts if committed by an individual shall be an offence if committed by a company"; and, further, that registered veterinary practitioners shall pay an annual fee to the College, the statutory body which regulates veterinary education and registration. It is not for me to forecast the prospects of this measure; but the fact that it is now submitted to Parliament suggests that its promoters have more hope of remedial legislation, in the interest of practice affecting the health and safety of the lower animals, than experience would justify us in entertaining were the interest in question merely that of practice among men, women, and children. I have merely to remind you that the Bill for the Prohibition of Medical Practice by Companies has not yet passed into law; and that the income of the General Medical Council is this year again insufficient to meet the expenditure incurred in the discharge of its statutory duties. The committee on unqualified practice has had before it the report on the subject issued by the Local Government Board in the course of last session. Dr. Langley Browne, as chairman, will bring up the committee's comments on the report, and the recommendations it offers regarding the next steps to be taken.

The Lord President of the Council has been so good as to forward to this Council, for its information, copies of the National Insurance Bill recently introduced by the Chancellor of the Exchequer. This far-reaching measure touches at so many points the conditions of professional efficiency in this country that it is difficult without close and prolonged study to estimate its effects, immediate and remote, on ordinary medical practice, on clinical hospitals, on public health administration, and on professional education. The Chancellor has admitted this difficulty, and has intimated his willingness to consider such suggestions and criticisms as he may receive from the medical profession of this country. From the nature of its statutory functions, the General Medical Council is necessarily concerned with certain aspects of each of the questions I have indicated; and in virtue of its statutory constitution it includes representatives of all departments of medical practice, and of all registered practitioners, incorporate or unincorporate, within the United Kingdom. I suggest, therefore, that it will be proper for the Council to respond to the Chancellor's invitation, and to offer him advice and assistance in relation to matters within its province which appear to be involved in the proposals of the Bill. If you approve this suggestion you will probably find it convenient, after some general discussion, to appoint a committee, with instructions to consider the medical clauses of the Bill, to watch it during its successive stages, to receive communications from members of the Council, to make representations to the Lord President for the information of the Government, and to report from time to time its proceedings to the President for communication to the members of the Council. Should you desire to form such a committee, it may be well to ask each of the Branch Councils to nominate (say) three members for the purpose.

On behalf of the University of Wales a Bill has been introduced in Parliament for enabling that University to hold qualifying examinations under the Medical Acts, in order that its degrees and diplomas may entitle their holders to registration. The Bill also proposes to confer on the University the power of appointing a member of this Council on the conditions laid down by recent Acts relating to other Universities. As this question has on several occasions been before the Council, which has called the attention of the University to the need for such legislation, I felt justified in informing the promoters that they might count on the Council's assent to the steps that have now been taken. The Lord President and the Secretary of State for Foreign Affairs have agreed to accept the invitation forwarded by the German Government, asking that a British delegation of five members should be appointed to represent this country on the International Committee for Post-graduate Medical Instruction.

I understand that members will be chosen by the several Government departments with which medical services are associated. The Lord President has done me the honour to suggest that, as your President, I should in the meantime represent him on the committee, with a view to a more permanent organisation of the British delegation.

Under your directions Mr. Arthur Swayne Underwood, M.R.C.S., L.D.S., was appointed by the Executive Committee to be Inspector of Dental Examinations on behalf of the Council. He has already visited and reported on six of the examinations, and in accordance with the Standing Orders his reports have been sent to the boards concerned for their observations. A report on the whole cycle of inspections will in due course be presented to you by the Dental Education and Examination Committee. To the three Standing Committees on Education, Examination, and Public Health, important questions have been referred, dealing mainly with the purport and effect of the Council's resolutions and recommendations on these subjects. I am not in a position to anticipate the conclusions arrived at by the several committees, but I am aware that much thought and labour have been devoted to the reports which are now in preparation, under the direction of their distinguished chairmen. The Pharmacopœia Committee has received from the Committee of Reference in Pharmacy a further report containing suggestions for the improvement of the Pharmacopœia. This report, with a promised supplement, will conclude the valuable series which had been furnished by the Committee of Reference. It will be published in the usual manner for the information of those concerned. The materials for revision, now accumulated in the hands of the Pharmacopœia Committee, are sufficient to enable it to proceed with the preparation of the first draft of a new issue of the Pharmacopœia. For this purpose it will be desirable to procure skilled editorial assistance, and the committee hope to complete the necessary arrangements during the summer. As some years must elapse before the work thus initiated is ready for publication, a fresh impression of the official British Pharmacopœia 1898 has been ordered, to meet the steady demand for it which still exists.

The Council must exercise its judicial functions in the case of certain practitioners who are alleged to have unjustifiably associated themselves with the practice of unqualified persons or companies. As the complaints in question are lodged by various incorporated bodies, including the British Medical Association, it will be necessary for me to act on the advice of our Judicial Assessor, and to direct that no member of the complainant body shall take part in any inquiry in which it is concerned. A glance at the provisional programme will show that the work before the Council this session is more than usually varied and important. It may not be possible to overtake it all in the course of the present week, but we may have every confidence that it will be dealt with at once carefully and expeditiously.

On the motion of Dr. LITTLE, the President was thanked for his address.

Dr. LATIMER, referring to the passage in the President's speech relating to Dr. McManus, said that he desired to bear testimony to his worth and his sense of duty.

Yearly Tables.

The Council then received the following tables:—(*a*) Tables showing results of professional medical examinations during 1910; (*b*) table showing results of professional examinations for qualifications in sanitary science, public health, or State medicine during 1910; (*c*) table showing results of professional dental examinations during 1910; (*d*) table showing results of preliminary examinations during 1910; (*e*) answers sent by the medical authorities as to the exemptions granted by them in any part of their examinations during the year 1910.

The Preliminary Sciences in the Medical Curriculum.

The Council then resumed consideration of the following motion by Sir HENRY MORRIS (which was adjourned from the November sittings of the Council):—

That, as the Education Committee in their report of Nov. 22nd, 1910, express views in favour of retaining the preliminary sciences (Chemistry, Physics, and Biology) as subjects of the medical curriculum, it be referred to the committee to consider and report to the Council as to the best way of amending the regulations of the General Medical Council in regard to the registration of medical students, with the objects, first, of making those regulations consistent with the report, and with the powers of the Council; second, of making clear the distinction between regulations which must be observed and recommendations made for the student's guidance; and third, of the advisability of altering or deleting Regulation 12 on page 14 of the Regulations printed under date June 1st, 1910.

(Regulation 12 is to the following effect:—"The commencement of the course of professional study recognised by any of the licensing bodies shall not be reckoned as dating earlier than 15 days before the date of registration.")

Sir C. NIXON (resuming the discussion) said that the Council had given the matter consideration over and over again. He did not agree with the views of Sir Henry Morris, especially as to uniformity of examination. He would be strongly in favour of letting things remain as they were. He did not think that this was the time for any fresh legislation in the matter.

Dr. SAUNDBY moved an amendment as follows:—

That the Education Committee be instructed to report to the Council as to what alterations in the Regulations No. 10, 11, and 12 for the registration of medical students are necessary to bring them into conformity with facts and the powers of this Council.

(Regulations 10 and 11 read as follows:—"Every medical student shall be registered in the manner hereinafter prescribed by the General Medical Council. No medical student shall be registered until he has attained the age of 16 years, has passed a preliminary examination recognised by the General Medical Council, and has produced evidence that he has commenced medical study at a University or School of Medicine or at a Scientific Institution recognised by one of the licensing bodies and approved by the Council.")

Dr. Saundby said that the whole point of this discussion was whether the Council should retain on its books regulations which it had not been able to enforce. Sir Henry Morris had very properly asked that these regulations should be altered and modified so as no longer to maintain the impression that students should not study these subjects in duly recognised secondary schools. What he disliked about this motion was that Sir Henry Morris had been so conciliatory.

Dr. LANGLEY BROWNE strongly supported the motion. He said that almost every educational body had taken notice of the regulations of the Council, and there was a great deal of feeling in the country that some alteration ought to be made in the rules and regulations which the Council was supposed to make. The Council had no power to make rules on this matter. It could only make recommendations, and he did not think that it should put forth as regulations what it had not the power to enforce. Many parents thought it necessary that their sons should take these subjects as part of their medical curriculum. It would be a good thing to put the Council straight with the educational world on that point. He thought that there would be no difficulty of teaching these preliminary sciences apart from the curriculum to medical students. He thought that instead of lengthening the medical curriculum they should rather shorten it.

Mr. TOMES said that he would like to second Dr. Saundby's amendment.

Sir THOMAS FRASER did not think that the Council ought to be prepared to hand over this teaching to the intermediate schools. Speaking in regard to Edinburgh University, he thought that it was of the great possible advantage that students should at present get their preliminary sciences at the University. Great strides had been made in the teaching of science in the schools, but so far as he could learn the amount of such teaching and accommodation in Scotland was not such as to enable the University to accept them as any substitution for university teaching.

Sir CHARLES BALL observed that the University of Dublin felt that these subjects, so far as its own students were concerned, were subjects that they could only learn at the University. They could not get sufficient teaching in the intermediate schools.

Dr. MACKAY said that the Education Committee was quite willing to report once more on this subject, although it had always taken the line that the time was not quite ripe for discussing it. The Council was entitled to make any suggestions, rules or regulations, or recommendations it desired in regard to the registration of students, but it had no power to enforce a single one. However, if the Council was of opinion that any licensing body was not educating its students sufficiently, it had the power to call the attention of the Privy Council to that body. It was only on the ground that the students were insufficiently educated that the Council could ask the Privy Council to take action.

Sir JOHN MOORE was strongly in favour of retaining these subjects in the medical curriculum, and he did not think that any other course would be possible in Ireland.

Dr. LATIMER said that the effect of the regulations was that parents withdrew their sons from the schools sooner

than was necessary, as they thought that it was absolutely necessary that the preliminary sciences should be taken in the medical curriculum. The result was that boys were withdrawn from public schools sooner than they ought to be.

Dr. NORMAN MOORE remarked that the Council had declined to recognise the teaching in a series of secondary schools in England in which the laboratories were excellent, in which excellent training was given, and even better provision was to be found than in some medical schools. The Council declined to recognise them, yet in them some of the best science teaching in England was to be found. The Royal Colleges in England, however, recognised a certain number of these schools, and he thought that it would be wise for the Council to go into the question again. The Colleges had no other interest than improving scientific and medical education in this country, and the only wise course for the Council was to reconsider their decision.

After further discussion,

Sir HENRY MORRIS (replying to the discussion) said that he held that the regulations referred to in the motion and amendment were absolutely inconsistent, not only with the powers of the Council, but also with the report which Dr. Mackay laid before the Council in November. He would ask the Council to make its resolutions and directions to students consistent with the report. They were inconsistent with it, because it was quite optional for a student whether he should take that part of his curriculum at a medical school. They were absolutely inconsistent with the powers of the Council. It was misleading, wrong, and harmful, cruel to parents and students alike, to put forth this impression that students must come away from school for the acquisition of knowledge in these subjects, or that if they remained at school they would have to go over this ground again. That was not the case. He felt it very difficult to justify the position which the Council took up in regard to these regulations, and he thought the time had come when for the credit of the Council it should not give to students and masters a false and misleading impression. He was willing to withdraw his motion in favour of the amendment.

On a show of hands the amendment was carried, and afterwards as a substantive motion became the finding of the Council.

The Council adjourned.

WEDNESDAY, MAY 24TH.

The National Insurance Bill.

After consideration of penal cases the Council debated in an interesting manner the effect of the National Insurance Bill on the profession, and appointed a committee of 11, 5 being members of the English Branch Council, 3 of the Scottish, and 3 of the Irish, to sit at once, and to report to the Council before the end of the session. The following were appointed: Dr. Saundby, Dr. Langley Browne, Dr. Latimer, Dr. Norman Moore, Sir Francis Champneys, Sir David McVail, Dr. Norman Walker, Mr. Hodsdon, Sir Charles Ball, Sir Arthur Chance, Dr. Leonard Kidd, and the president *ex officio*.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

Surgery.—H. H. Budd (Section I.), St. Mary's Hospital; J. M. E. R. Le Dentu (Sections I. and II.), Bordeaux; and H. Rowntree (Sections I. and II.), Middlesex Hospital.
Medicine.—J. M. E. R. Le Dentu (Section I.), Bordeaux; and H. Rowntree (Sections I. and II.), Middlesex Hospital.
Forensic Medicine.—R. A. Robinson, Liverpool; and G. H. Varley, Oxford and St. George's Hospital.
Midwifery.—J. M. E. R. Le Dentu, Bordeaux.

The diploma of the Society was granted to the following candidate, entitling him to practise medicine, surgery, and midwifery:—H. Rowntree.

FOREIGN UNIVERSITY INTELLIGENCE.—*Clausenberg:* Dr. Aurel Hanka, staff surgeon, has been recognised as *privat-docent* of Military Surgery. Hitherto this subject has not been granted a place in the teaching programme of any Hungarian university.—*Frankfort:* A new biological institute has been erected in Paul Ehrlich-street by private individuals. Its director will be Professor F. Blum.—*Ghent:* Dr. Daels has been appointed to the chair of Midwifery and Gynæcology in succession to the late Professor v. Cauwenberghe.—*Greifswald:* Dr. P. Adloff of Königsberg has been appointed Lecturer on Dentistry and Director of the Dental Institute, in succession to Professor G. Fischer, who has migrated to Marburg.—*Halle:* Dr. Kathe has been recognised as *privat-docent* of Hygiene.—*Kiel:* Dr. Wilhelm Pfeiffer, *oberarzt* in the University Medical Clinic, has been granted the title of Professor.—*Leipsic:* Dr. Friedrich Trendelenburg, whose name is well known in operating theatres all over the world, is retiring from the chair of surgery, which he has held since 1885, when he succeeded Professor Thiersch. He is in his sixty-seventh year.—*Marburg:* Dr. Otto Veit, prosector in the Anatomical Institute, has been recognised as *privat-docent* in Anatomy.—*Turieff (Dorpat):* Dr. A. Rauber, professor of anatomy, having reached the age of 70, is retiring.

THE ASYLUM WORKERS' ASSOCIATION.—The annual general meeting of this association was held on May 24th at the Medical Society's house, 11, Chandos-street, Cavendish-square, W., Sir William Collins presiding. The executive committee, in presenting its annual report for 1910, was able to record continued progress and expansion of the association. On Dec. 31st, 1909, the aggregate number of members was 4575; at the end of 1910 it had risen to 5276, each of the three classes of membership showing a satisfactory augmentation, though probably not more than one-fourth of the asylum workers in the United Kingdom were as yet represented. On Dec. 31st, 1909, the aggregate credit balance stood at £152 7*s.* 11*d.*, but by the end of 1910 it had dropped to £121 16*s.* 9*d.*, due to diminished contributions to the Homes of Rest Fund. Although the receipts for the general account were the largest on record, amounting to over £411, the expenditure was also unusually large, and it was found necessary again to levy a charge on the Homes of Rest Fund for the expenses of management. As usual, the most considerable expenditure had been in the production and distribution of *Asylum News*. Indebtedness was acknowledged to Dr. James Nicoll for his skill and kindness in gratuitously editing the paper. The balance sheet showed a balance in hand to the General Fund of £2 7*s.* and to the Homes of Rest Fund of £119 9*s.* 9*d.*—total £121 16*s.* 9*d.* The joint committee of representatives of the Medico-Psychological and of the Asylum Workers' Association appointed in 1909 to watch the administration of the new Act, has held ten sittings, and in many instances has been able to give such advice to those complaining of grievances with regard to classification under the Act as has been effectual in obtaining justice for them. The committee found it necessary twice to take the opinion of counsel as to the proper interpretation of certain expressions. In a few cases what appeared to be clear evasions of the Act came under notice, and the advice given to those aggrieved was to lodge appeals with the Home Secretary under the provisions of Clause 15. In the great majority of asylums the arrangements for recognition of established officers have been satisfactory. With further experience of the working of the Act it may be desirable to endeavour to obtain amendments of obscure or defective clauses. There can be no doubt that the Asylum Officers' Superannuation Act has secured advantages for asylum workers which for years they had been denied. Owing to a desire on the part of certain managers of registered hospitals and proprietors of private asylums to promote in their institutions schemes of superannuation a subcommittee appointed for inquiring into the best practicable methods of attaining this object has collected terms upon which retiring allowances, either at 50 or 55 years of age, would be available from various insurance societies as well as the Royal National Pension Fund, and hopes shortly to place the result of its labours before the association. The following alterations in the medal regulations have been sanctioned by the executive committee: In future all candidates must have been five years members of the association and have had at least 25 years' service. The adjudication of gold and silver medals respectively is to be left to the judgment of the committee after consideration of the certificates of service and of the nature of the posts held. With regard to the Asylum Officers (Employment, Pensions, and Superannuation) Bill, while the grievance of unduly long hours of duty in the wards of

some asylums, particularly in Ireland, had from time to time been sympathetically considered by the executive committee and efforts made to procure ameliorations, it was not thought prudent to load a Bill seeking for the first time and in the face of considerable opposition to gain for asylum workers the benefit of assured and definite pensions with provisions for limiting the hours of labour in asylums. It is, however, a matter of gratification to note how much more extended is the interest now displayed by honourable Members in the welfare of asylum staffs than was the case in 1909. The question of the restriction of the hours of employment, of course, requires careful consideration of detail in view of the peculiar exigencies of the service of the insane. These matters will, however, be duly threshed out before the Select Committee, to which the Bill is to be referred.

UNIVERSITY OF BIRMINGHAM.—Changes have recently been made in the organisation of the Faculty of Medicine. Hitherto the clinical teaching has been directed by a clinical board appointed by the staffs of the General and the Queen's Hospitals. In future the clinical board will consist of five representatives of the University and two from each hospital. The board will arrange all details of clinical teaching, the financial affairs will be controlled by the University, and the teachers will all be members of the University staff. The Board of Education will henceforward recognise the medical course at Birmingham as a course in a "technical" subject for the assistance of which a money grant is to be made. Hitherto assistance of this kind has been refused to the medical subjects on the ground that the University was responsible for only a part of the teaching.

ST. PANCRAS SCHOOL FOR MOTHERS.—The annual meeting of the St. Pancras School for Mothers, to which all who are interested in the work of the society are invited, will take place at The Welcome, 37, Charlton-street, Euston-road, N.W., on Tuesday, May 30th, at 3 P.M., when Lady Meyer will preside. Mr. James Cantlie, Mrs. Paget (wife of the Bishop of Stepney), and Dr. J. F. J. Sykes will address the meeting. Light refreshments will be provided, and there will be an inspection of the school at the close of the business proceedings. The work of the society for the year ending March, 1911, has been most satisfactory. The committee of the School for Mothers, realising the need for some provision for children over the age of 12 months, has extended the infant consultations so as to include children up to the age of five years, thus making a link between the infant inspection and the school inspection. A little nursery school on the Froebel system has also been opened with great benefit to the children. It is hoped that arrangements will soon be made for mothers to take part in the play of the children in order that they may catch the spirit of the teacher and see for themselves how to manage and train their little ones. The visiting of expectant mothers is a feature of the work of the society from which good results are anticipated, and an effort is being made to interest working men in the duties and responsibilities of parents.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—The annual general meeting of this society was held on May 17th, Dr. G. F. Blandford, the President, being in the chair. The report and financial statement for 1910 were adopted. A cordial vote of thanks was passed to the editors of the various medical journals who from time to time publish notices of the proceedings of the society. Since the last report 11 new members were elected, 4 died, and 2 resigned. The society consists at the present time of 1 honorary member, 140 life, and 153 ordinary members, making a total of 294. The directors regret to have to report the death of one of the Vice-Presidents of the society, Dr. James Edward Pollock. The invested funds amount to £100,900. £352 14*s.* 6*d.* were received in subscriptions and donations. Amongst the annuitants of the charity—namely, 48 widows and 13 orphans—the sum of £3131 10*s.* was distributed. The Copeland Fund is a special fund which enables the society to grant to any widow or orphan already in receipt of the society's ordinary relief extraordinary assistance in special circumstances of unusual distress. Three widows were elected during the year. Relief is only granted to the widows and orphans of deceased members, who have paid their annual subscription for three years, or who are life members. The directors would bring to the notice of the members of the medical profession, especially the younger, the advantages of joining the society. Membership is open to any registered practitioner who at the time of his election is resident within a 20-mile radius from Charing Cross. Should any member remove beyond the limits of the society he nevertheless continues to be a member. The annual subscription is 2 guineas; every member who has paid this sum for 25 years becomes a member for life. Life membership may also be obtained by the payment of one sum, varying with the age of the applicant. Further particulars and application forms may be obtained from the secretary at the offices of the society, 11, Chandos-street, Cavendish-square, London, W.

DONATIONS AND BEQUESTS.—The late Mr. F. Smith of Gadgirth, Ayrshire, has left by will £2000 each to the Royal Infirmary, Glasgow, the Western Infirmary, Glasgow, and the Victoria Infirmary, Glasgow.—Under the will of the late Miss Jane Tulloch, St. Mary's Hospital and the New Hospital for Women will each receive £1000.—The treasurer of Charing Cross Hospital has received an anonymous donation of £1000 and a donation of £500 from the trustees of Smith's (Kensington Estate) Charity. From this charity the committee of management of the Mount Vernon Hospital for Consumption and the Royal Dental Hospital have also received £500.

ROYAL COLLEGE OF SURGEONS IN IRELAND: GENERAL MEETING AND ELECTION OF OFFICERS.—A meeting of the College will be held on Saturday, June 10th, at 1 o'clock, to receive the annual report of the Council. A meeting of the College will also be held on Monday, June 12th, at 1 o'clock, to elect a President, Vice-President, Council, and Secretary of the College for the ensuing year. Fellows who may desire to have their names printed on the list of candidates for office must signify their wish by letter to the registrar, at the College, on or before Tuesday next, May 30th. No candidate is eligible unless his application is received within the date specified.

ROYAL INSTITUTION.—On May 12th Professor William Stirling, M.D., LL.D., D.Sc., gave a lecture on Biology and the Cinematograph. The lecturer traced the evolution of the cinematograph and showed a large number of experiments on the persistence of vision, including the thaumatrope, phenakistoscope of Plateau, the stroboscope of Stampfer, and the zoetrope. The last-named instrument, or wheel of life, is said to have been originally invented by Jerome Cardan, a well-known physician of the sixteenth century, but his invention was forgotten. The perfecting of photography made cinematography possible. Photographs were first made on fixed or stationary plates by Marey and others, and on moveable glass plates by M. Taussin in 1874, who secured the Transit of Venus in this way, and when the series of photographs was shown by means of a stroboscope the planet was seen to pass across the sun's disc. With the use of a transparent flexible film of celluloid, coated with a sensitised emulsion, cinematography became possible. The lecturer dealt chiefly with the educational value of the instrument. The following were some of the original films made by Messrs. Gaumont to illustrate the lecture: An artificial amœba; Ostwald's physical heart; ciliary motion, and what it can do; movements of the starfish and sea urchin; flight and movements of the wings of a dragon-fly and a blue-bottle; movements of the lungs of a dead rabbit in artificial breathing; movements of the gullet, stomach, and intestine of frog as seen by X rays; unilateral reflex movements of a frog; response of a frog to a chemical stimulus; reflex in turkeycock; heart of frog recording its movements and arrested by stimulation of the vagus nerve; magnified view of sequence of events during a heart beat; excised heart of dead tortoise suspended in air and beating, effect of heat; tortoise heart beating on a glass plate; excised heart of a dead rabbit perfused with Locke's fluid and recording its movements; arrest of heart beats by means of chloroform, recovery from effects of chloroform; and effects of adrenalin on the heart.—On Tuesday next (May 30th), at 3 o'clock, Professor W. W. Watts delivers the first of two lectures at the Royal Institution on Charnwood Forest, its Ancient Volcano and its Fossil Landscape; on Thursday (June 1st) Mr. T. Thorne Baker commences a course of two lectures on (1) Changes Effected by Light, (2) Practical Progress in Wireless Telegraphy; and on

Saturday (June 3rd) Dr. W. L. Courtney begins a course of two lectures on Types of Greek Women. The Friday evening discourse on June 2nd will be delivered by Commendatore G. Marconi on Radiotelegraphy, and on June 9th by Professor Svante Arrhenius on Applications of Physical Chemistry to the Doctrine of Immunity.

Dr. H. V. Wenham, F.R.C.S. Eng., professor at the Union Medical College, Peking, reports that for the first time in history a medical degree has been granted by the Chinese Government. Sixteen out of 21 candidates have passed the required examinations in medicine.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on May 18th, Sir Francis H. Champneys being in the chair. A letter was considered from the inspector of midwives of the county borough of Hull as to the difficulties experienced by midwives in obtaining medical help in cases of emergency. The Board decided that the reply be that the midwife is not responsible to the guardians, but to the local supervising authority and to the Board. A letter was considered from a certified midwife complaining of the inadequacy of the training given at a recognised training school. The Board decided that inquiry be made of the authorities at the training school as to the actual facts of the case. A letter was considered from the town clerk of Manchester as to the decision of the Board to take no action in the cases of two certified midwives, against whom the local supervising authority had found *primâ facie* cases of misconduct and negligence respectively. The Board directed that the town clerk of Manchester be informed that the local supervising authority appears to have entirely misapprehended the effect of the Board's procedure in penal cases, and that the appearance of the medical officer of health or the inspector of midwives at the hearing of a case is always welcomed by the Board. A letter was read from the clerk of the Privy Council, transmitting for the observations of the Board a letter with enclosures addressed by Mr. Harold Baker, M.P., to the President of the Local Government Board, in regard to the case of Annie Ireland, late No. 4407, whose name was removed from the Midwives Roll on March 30th, 1911. The Board decided that the secretary be directed to communicate the facts of the case to the Privy Council.

THE ROYAL SANITARY INSTITUTE.—An enjoyable evening was spent by the Fellows, Members, and Associates of the Royal Sanitary Institute and their friends on the occasion of the annual dinner, which was held in the Langham Hotel, Portland-place, W., on May 18th. The President of the institute, the Duke of Northumberland, occupied the chair, and he was supported, amongst others, by the Presidents of the Royal Colleges of Surgeons and Physicians, Sir James Porter, K.C.B., Surgeon-General Gubbins, C.B., M.V.O., Sir Shirley Murphy, Dr. B. A. Whitelegge, C.B., and Dr. A. Newsholme. After the usual Royal toasts had been proposed and duly honoured, His Grace, in proposing the toast of "The Royal Sanitary Institute," referred to the satisfactory progress which had been made in regard to membership. There were now 4800 members on the roll of the institute. He was glad also to record that the institute had had several great sanitary Imperial questions brought before them. They had in particular given much attention and time to the question of preserving the health of armies in the field. He thought that the advocates of universal service made a mistake, and that instead of talking of "service" they should talk of "drill." For physical reasons and on grounds of health every boy in this country should receive, he maintained, an efficient course of drilling. He referred also to the extension of their examinations to the Bombay Presidency, Hong-Kong, South Africa, and several States of the Australian Commonwealth. The institute was doing a good service in the interests of all communities, and Mr. H. Percy Boulnois, M.Inst.C.E., the chairman of the council, who responded to the toast, regarded this, very rightly, as a matter for congratulation.—The following members of the medical profession have this month been elected Fellows or Members of the institute:—Fellows: Major W. W. Clemesha, I.M.S., M.B., D.P.H.; Edward Sergeant, L.R.C.P., M.R.C.S.; and R. P. Williams, M.D., B.S., D.P.H. Members: A. H. Gerrard, M.D., D.P.H.; Captain A. H. Hayes, R.A.M.C., M.R.C.P., D.P.H.; O. G. F. Luhn, M.A., M.B., D.P.H.; Fred C. Smyth, M.D., D.P.H.; and S. A. Tucker, M.B., D.P.H.—The provincial sessional meeting of the institute will be held at Exeter on June 2nd and 3rd. On Friday, June 2nd, a discussion on Ventilation in Theory and Practice will take place in the Royal Albert Memorial University College, Exeter, at 7.30 P.M.

LITERARY INTELLIGENCE.—A new edition of Sir Frederick Treves's and Mr. Jonathan Hutchinson's "Handbook of Surgical Operations," revised by the latter, is announced for publication by Messrs. Cassell and Co.

THE Christiania Society of the Sciences has elected Professor Kraepelin of Munich as Foreign Member. The Norwegian Medical Society has elected Professor Ewald and Professor Flügge of Berlin, Professor Fuchs of Vienna, and Professor H. Sahli of Berne as Honorary Foreign Members.

UNIVERSITY OF LONDON: FACULTY OF MEDICINE.—A meeting of the Faculty of Medicine was held at the University of London on May 19th, the Dean, Dr. Sidney H. C. Martin, being in the chair. Dr. E. I. Spriggs was elected honorary secretary in the place of Mr. H. J. Waring, who had resigned that office. The Dean proposed a vote of thanks to Mr. Waring for his services to the Faculty, which was carried with acclamation. A report from the Board of the Faculty upon the communication from the finance committee of the Senate with reference to the needs of the Faculty in terms of money was to have been concluded, but the Dean remarked that the matter would have to be further considered by the Board, and that its conclusions would be reported to the Faculty in due course. Miss Julia Cock was elected a member of the Board of the Faculty. A ballot then took place for the appointment of a person to represent the Faculty on the Senate for the period 1909–13 in the place of Professor E. H. Starling resigned. Two nominations had been received: Sir John F. H. Broadbent, Bart., M.D., B.Ch., M.A. Oxon., F.R.C.P., and Mr. H. J. Waring, M.S. Lond., M.B., B.Sc., F.R.C.S. The result of the ballot was as follows: Mr. Waring, 33 votes; Sir John Broadbent, 14 votes. Mr. Waring was declared elected. The proceedings then terminated.

A NEW INSTITUTE FOR CANCER RESEARCH.—The new Research Institute of the Cancer Hospital in the Fulham-road, London, was opened on May 23rd by His Royal Highness the Duke of Connaught, who was accompanied by the Duchess of Connaught. The Earl of Northbrook presented an address to the Duke of Connaught, in which he briefly referred to the work of the hospital since its foundation in 1851 by Dr. William Marsden, and drew special attention to the investigations that have been made there into the mysteries of the nature and causation of cancer. The Duke of Connaught, in reply, referred to his association with many of the principal hospitals of the metropolis, and said that his presence there would assure them of the deep interest he took in their special work, which had entailed the most strenuous efforts on the medical men of the hospital, and had been carried on under great financial difficulties. "All of us," he said, "who have had relations suffering from this disease will recognise the importance of leaving nothing undone to overcome it." He expressed the hope that the public would come to the help of the hospital, which had yearly gone on with an expenditure of £6000 more than its income in its efforts to stamp out this terrible disease. The institute has been adequately planned to carry on the scheme of research adopted by the hospital, by affording facilities for the study of every branch of medical science bearing on the subject. It contains 10 laboratories, half of which are set aside for chemistry and physics. There are a laboratory for experimental electro-radio-physics, with a photographic department attached; a special laboratory for preparatory chemistry, with mills, presses, combustion furnace and all necessary equipment; an underground laboratory for working at an equable temperature and a library. The scientific apparatus is of the latest kind and contains many novel devices, trifling in themselves, but which, nevertheless, will add materially to the convenience of the workers. For instance, there is a scheme of colouring for all the different pipes that run through the laboratories, whereby the purpose of each pipe can be at once distinguished in whatever situation it may be seen, and the taps for controlling the water-supply in the

sinks are placed at the edge of the table instead of being attached to the faucets, so that the danger of upsetting apparatus on the table when reaching over to the water-supply is done away with. The institute, which is lighted throughout with electricity and amply supplied with gas and hot and cold water, was designed by the achitect, Mr. Alexander Graham, with the assistance of the director, Dr. A. Paine.

FIFTH INTERNATIONAL CONGRESS FOR THALASSOTHERAPY (KOLBERG).—We gave some particulars concerning this congress in THE LANCET of March 18th, p. 775. We are now informed by the secretary that the congress will be opened on June 6th by H.R.H. the Grand Duke of Mecklenburg-Schwerin personally. The Governments of almost all civilised countries will be represented by official delegates. In the first session Geheimrat Zuntz will give an address upon the Physiological and Hygienic Effects of Sea Trips.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The National Insurance Bill.

WHEN so vast a measure as the National Insurance Bill is presented to the House of Commons some time must elapse before the exact bearing of its complicated details is grasped. In this case, even the lengthy speech of the Chancellor of the Exchequer when he introduced the measure, the publication of the text of the Bill and the explanatory memorandum issued a few days afterwards have failed to satisfy the curiosity of Members who are taking a keen interest in the scheme. Daily the notice paper contains questions addressed to Mr. LLOYD GEORGE on various points connected with it. Many of these concern the effect of the measure on friendly societies. The right honourable gentleman has explained many obscure points, but so far as the relation of the medical profession to the proposals of the Bill is concerned his assurances given to THE LANCET are more explicit and complete than any declaration he has made in Parliament. Many Members are receiving either individually or collectively the views of medical men on their position under the Bill. In such an intricate measure there must be a mass of detail which is of a tentative nature. One of the features of the Chancellor's Ministerial career has been his readiness to listen to the representations of persons having an interest in his proposals. Parliamentary opinion credits him with a desire to reduce obstacles to the passage of the Bill by full interchange of view with professions and organisations affected by it.

Several Parliamentary papers bearing on the question of National Insurance, have been issued by the CHANCELLOR of the EXCHEQUER with the view to place at the disposal of Members information bearing on the subject. One of these is a report of the actuaries in relation to the scheme of insurance against sickness, disablement, &c., embodied in the Bill. A second is a memorandum on sickness and invalidity insurance in Germany, whilst a third report contains the opinions of various authorities in Germany on the subject. Some pressure has been put upon Mr. LLOYD GEORGE to postpone the second reading of the Bill until medical men and associations, friendly societies, and other bodies may have had an opportunity of giving a close and considered attention to the details of the measure. However, he declines to take this course on the ground that the criticism arises in regard to details. He has promised on the second reading to make a full declaration as to the position of medical men under the scheme. He maintains strongly that his proposals will be for the benefit of the profession.

Asylum Officers (Superannuation) Bill.

The Select Committee of the House of Commons to take evidence and report on the Asylum Officers (Superannuation) Bill has been constituted as follows: Mr. CHARLES BATHURST, Mr. BLACK, Mr. BROCKLEHURST, Mr. COTTON, Mr. CHARLES CRAIG, Sir HENRY CRAIK, Mr. DICKINSON, Mr. HAYDEN, Mr. HIGHAM, Sir D. BRYNMOR JONES, Mr. MCCALLUM, Mr. WILLIAM REDMOND, Mr. REMNANT, Mr. CHARLES ROBERTS, Mr. WATSON RUTHERFORD, Mr. STANIER, Mr. WARDLE, and Viscount WOLMER.

Second Reading Debate on the National Insurance Bill.

Mr. BUXTON, the President of the Board of Trade, moved the second reading of the National Insurance Bill in the House of Commons on Wednesday, May 24th. He dealt largely with its effect upon unemployment. It was understood that the Chancellor of the Exchequer was to speak at a later stage of the debate, and that he was then to make his promised statement in regard to the position of medical men under the proposals of the Bill. However, several speakers, notably Mr. H. W. FORSTER, Dr. ESMONDE, and Dr. ADDISON commented on the effect of the measure on medical practice. Several opinions were expressed that as framed it dealt most unfairly with members of the profession. Dr. ADDISON remarked that the higher the income limit the greater would the capitation grant to medical men have to be. The vital point of the debate as regarded the medical profession would be the attitude of the Chancellor in regard to its representations. The Chancellor's statement was not made on the first day of the discussion, but when the Attorney-General, Sir RUFUS ISAACS, remarked late at night that the claims of medical men would be met in a reasonable and equitable spirit, it was hoped by those interested in the matter that the Chancellor's declaration later would remove the objections entertained by them.

HOUSE OF COMMONS.

WEDNESDAY, MAY 17TH.

Local Health Committees.

Mr. ORMSBY-GORE asked the Chancellor of the Exchequer whether the local health committees proposed to be established in his National Insurance Bill would be so constituted that they would be able, if Parliament thought fit, to take over the other duties dealing with public health in addition to those imposed on them in the National Insurance Bill, so that the whole of the public health service might be unified.—Mr. LLOYD-GEORGE replied: I cannot say what conditions Parliament may think necessary for such a measure of unification. The honourable Member is no doubt aware that the insured persons will be directly represented by a majority of the local health committee.

Notification of Phthisis.

Colonel RAWSON asked the President of the Local Government Board whether he would consider the desirability of taking immediate steps to promote legislation to make all cases of phthisis compulsorily notifiable.—Mr. BURNS wrote in reply: As I explained to the House a short time ago, I have recently extended the range of notification of pulmonary tuberculosis. Before proceeding further in that direction I propose to await the results of that extension.

The Provision of Sanatoria.

In the course of the discussion on the financial resolutions of the Budget in Committee of Ways and Means,

Mr. BALFOUR said that he rose to ask the Chancellor of the Exchequer to exercise, as he was sure the right honourable gentleman would be ready to do, a certain caution in carrying out one part of his scheme of National Insurance, which must have great attractions for all honourable Members—namely, the application of large capital sums to the building of sanatoria throughout the country. He thought that perhaps in the public mind there had been an undue or slightly exaggerated enthusiasm with regard to this particular method of dealing with tuberculosis. The public had an idea that the mere open-air treatment by itself produced such marvellous results that they might through it, and it alone, look to, if not the extermination of the appalling scourge of tuberculosis, at all events to an immense diminution in the disease, and that they might reduce it to one of the rarer of the zymotic diseases from which people in this country suffered. He was not quite sure that the most recent investigations into the results of the mere treatment in sanatoria—the fresh air, adequate food, and so on—bore out all the hopes that people were at one time prepared to entertain in regard to it. There were very able investigators in this country who took a much less sanguine view. After examining, as far as they could, the actual results obtained in this country and in Germany they had come to the conclusion that they must not expect quite the same proportion of complete cures as at one time they had all hoped for. He certainly took a sanguine view as to the treatment of tuberculosis. He believed that medical science had made, was making, and was destined to make, immense strides. But when the committee came to such large capital sums as those dealt with by the Chancellor of the Exchequer, he hoped that the right honourable gentleman would bear in mind what he (Mr. Balfour) was sure was the truth—that while it was possible to waste money upon vast permanent and expensive structures, it was not really possible to waste money if it was devoted judiciously to scientific medical investigations into the causes and cure of the disease. There was a great movement abroad as well as in this country in favour of dealing with tuberculosis, not merely in these great sanatoria, but in the homes of the rich and of the poor, and probably as medical science advanced it would be found possible to deal with it in that way. To remove a phthisical case might have great advantages merely from the point of view of segregation. If a man happened to be in a very infectious condition he was a source of danger to those nearest and dearest to him, and his mere removal from his home to one of these hospitals no doubt diminished the disease by diminishing the infection. But he (Mr. Balfour) was looking at the matter from the point of view of curing the disease. From that point of view he thought that the House ought to be very careful and ought to exercise caution in the way in which the money was spent. Let honourable Members not assume that the cure of tuberculosis in all its forms had been discovered, and that all they had to do was to spend money in carrying out that cure. That he thought was not the fact. What was the fact was that medical science had made great progress. Further investigation and perpetual study were required in regard to how consumptive patients were being treated when they were in sanatoriums. That was not a completed page of medical inquiry. Far from it. Perhaps one of the great benefits that would be derived from these sanatoria would consist not so much in carrying out what might be considered a well-understood cure of tuberculosis, but in giving expert medical authorities the power of carrying on investigations which would enable them in the future to deal with this disease in a manner that he was not quite sure they were able to deal with it at the present time. He was sure that the Chancellor of the Exchequer would understand that he was not making these remarks in a discouraging spirit. That was really not the case. He was an optimist in all these questions of dealing with zymotics. He himself welcomed most cordially the expenditure of public money for the purpose of dealing with them in a national spirit and on a national scale. But let the House take care in so dealing with the matter on a national basis and on a national scale not to spend too much of the money on inanimate structures which in themselves might be no good, but rather to spend a little more in carrying out those further schemes of

research and investigation on which the real progress of the race in these medical matters most assuredly depended.

Mr. LLOYD GEORGE (Chancellor of the Exchequer) replied that he was sure the Committee was very much indebted to the right honourable gentleman for the contribution he had made to the consideration of a problem which, although it did not arise strictly on the Budget, money was provided for, and therefore the discussion of the matter was relevant. The point which the right honourable gentleman had put was one which had engaged the attention of the Government. He had no doubt at all that a short time ago too perfect results were expected from sanatoria. He was not sure that the reason why they had not been, he would not say complete, successes, but the reason why they had not effected cures in more cases than they had done, was that they did not receive patients at a sufficiently early stage. That he was assured on all hands. He also thought that medical men had rather exaggerated what might be expected, and that, in fact, so much could not be expected from sanatoria as was hoped at one time. The right honourable gentleman said very truly that, after all, the most important thing was to encourage scientific investigation into the cases with a view to discovering the best method of cure. That the right honourable gentleman would find provided for in the National Insurance Bill. He (Mr. Lloyd George) realised the importance of it, and he had provided out of the Exchequer Government contributions for sanatoria. At the same time, he agreed so thoroughly with the right honourable gentleman that he had also set aside a special fund for the purpose of scientific research. He did not think that sanatoria were by any means the last word in the problem; they were but a stage on the road. He did not think that even if sanatoria turned out to be not perhaps a mistaken idea, but a crude idea, the money would be wasted. What would happen would be that in the case of a great many patients, numbering perhaps twenty or thirty thousand, they would have medical men who would be specialists in tuberculosis. These gentlemen would be watching it day by day in its development and they were bound to get to know far more about it than was known at the present time. In the end, especially if there was a fund of this kind set up, it might be possible to find something far more perfect in the way of treatment than was known at present. At any rate, the money would not be thrown away, although eventually the cure might be in a system that provided for special diet, good sound healthy diet, under healthy conditions. That was bound to assist in the cure of the patient. Therefore these buildings would not be thrown away whatever happened. The most important thing of all was what the right honourable gentleman incidentally referred to—that there ought not to be merely expensive buildings. In Germany he was told that much more money was spent on architecture than was really absolutely necessary. That was not his own opinion, and therefore it must not be taken that it had decided the action of the Government. However, it was a complaint against the German authorities that a good deal of capital had been thrown away on the architecture of the buildings. It was quite possible that at some future time the sanatoria would have to be reconstructed or adapted to new ideas. Therefore it was important that useful, serviceable buildings should be erected and that money should not be squandered on the architectural side. He had been told that the manner in which this matter was approached made a great difference. For instance, money might be spent on buildings similar to the way it had been done in Germany, where the cost had been £1000 a bed, whereas he was assured by those who had studied the matter thoroughly £100 a bed would provide quite good buildings, even better for the purpose. Therefore, what was of importance was that the money should be usefully and economically spent. The first thing to consider was that it should be spent under conditions where the best kind of medical man was available to watch the progress of the disease, that it should be spent under the direction of the best scientific authority in the land, so that it might end in the discovery of something which would enable the disease to be as effectively stamped out as small-pox was over a century ago. That was what ought to be aimed at. He was exceedingly grateful to the right honourable gentleman for the pronouncement he had made, because it was a good thing to attract attention to that side of the work. It was a mistake to encourage false hopes in a matter of this sort. The most important thing was that immediate efforts should be directed into the right channels. To say that by merely building sanatoria costing £1,500,000 in this country a cure would necessarily be found would be to encourage false hopes. The intervention of the right honourable gentleman had enabled him to point out what he ought to have pointed out when he introduced the Bill, that the Government was making a contribution towards scientific research.

Mr. H. LAWSON: Does the right honourable gentleman propose to assist existing sanatoria, such as Bellingham and others?

Mr. LLOYD GEORGE: Certainly. The Government could not hope to build a sufficient number of sanatoria without depending also upon those which had been built by voluntary contributions and even those which were being built by private enterprise. He would direct the attention of the right honourable gentleman to the National Insurance Bill, Clause 15, subsection 2, paragraph (b). He was rather surprised that no attention had been drawn to it. It had escaped even the attention of the press. The paragraph ran: "Provided that the Insurance Commissioners may retain the whole or any part of the sums so payable out of the moneys provided by Parliament for the purposes of research." That would cover the whole ground which the right honourable gentleman brought before the House.

In the course of the subsequent debate

Mr. SPEAR said that as one who had been connected with sanatoria he welcomed the part of the scheme of the Government which dealt with them. The Chancellor of the Exchequer had laid stress upon dealing with tuberculosis in its early stages, which was most important, but what was equally important was that cases should be kept sufficiently long in the sanatoria in order that the cure might be complete and effective. In one sanatorium with which he was acquainted, owing to lack of funds and therefore owing to limited accommodation, persons apparently pretty well cured had been obliged to return home and live under conditions which menaced the lasting effect of the recovery. He earnestly hoped that the Chancellor of the Exchequer would make provision in his scheme that patients should be able to be retained in sanatoria until their convalescence was complete.

THURSDAY, MAY 18TH.

Maternity Benefits.

Mr. LEES SMITH asked the Chancellor of the Exchequer whether, under the National Insurance Bill, a woman insured who was suffering from scarlet fever would be entitled to sickness benefit of 7*s.* 6*d.* per week in cash and medical attendance in addition, whereas such a woman in childbirth would receive only maternity benefit of 30*s.* for four weeks without medical attendance.—Mr. LLOYD GEORGE replied: It is not the practice of friendly societies to give sick pay in maternity cases. Consequently the maternity benefit under the Bill which covers medical attendance must be regarded as a benefit additional to sickness benefit and not as a substitute for it.

Mr. CHIOZZA MONEY: Is not this the most generous scheme of maternity insurance ever proposed?—Mr. LLOYD GEORGE: That is certainly the case. It is much more generous than any scheme of maternity benefit provided by the friendly societies. It is also more generous than any scheme in Germany or any other country.

Mr. CHARLES BATHURST asked the right honourable gentleman whether medical benefit under the National Insurance Bill would include the attendance of a doctor in maternity cases if summoned in an emergency on the advice of a midwife acting under the rules of the Central Midwives Board.—Mr. LLOYD GEORGE answered: The attendance of a medical man in maternity cases is provided for by the maternity benefit, not by the ordinary medical benefit.

Sickness Benefits and Misconduct.

Mr. LEACH asked the Chancellor of the Exchequer to explain to the House the kind of sickness which, being attributable to an insured person's own misconduct, disqualified him from sickness or disablement benefit.—Mr. LLOYD GEORGE said in reply: If my honourable friend will refer to Clause 13 (4) of the Bill he will see that this is a matter which an approved society will be left to regulate by its own rules. In the actual practice of friendly societies the most usual cases of this sort are those of venereal disease or bad cases of drunkenness.

The Health Visitors Bill.

Mr. CHARLES BATHURST asked the President of the Local Government Board whether, in view of the provisions in the National Insurance Bill for the formation of local health committees, the Government proposed to abandon their Health Visitors Bill or to defer taking its subsequent stages until after the duties of the above committees had been defined by statute.—Mr. BURNS answered: The provisions of the National Insurance Bill do not touch the question of the appointment by local authorities of health visitors, which is the subject dealt with in the Health Visitors Bill.

Mr. CHARLES BATHURST: Will there not be danger of overlapping if another local authority is appointed and a different body is appointed under the National Insurance Bill?—Mr. BURNS: Not under this Bill. The Health Visitors Bill deals with children under five years. The National Insurance Bill does not deal with persons so young as that.

Vaccination in Barracks.

Mr. JOHN WARD asked the Under Secretary of State for War to explain why conscientious objection certificates obtained by soldiers under the Vaccination Acts, 1898 and 1907, were not recognised by the army authorities in the case of the children of such soldiers living in barracks, no matter in what part of the world they were serving.—Colonel SEELY (in a written answer) replied: It is essential that the troops should incur no risk of infection from families residing in barracks who are unvaccinated and who are therefore regarded as a menace to the health of the soldiers. Such residence in barracks is a privilege, and those granted the privilege must comply with the sanitary regulations for the use of the barracks.

The Death-rate in India.

Mr. FREWEN asked the Under Secretary of State for India what was the normal death-rate for India; and what was the death-rate during the two years of scarcity, 1897 and 1900.—Mr. MONTAGU furnished the following written reply: It is not easy to say what the normal death-rate for India is. The death-rates of the several provinces differ considerably in any given series of years, and the death-rate for British India as a whole is subject to great variations. The mean death-rate for British India in the ten years 1890–9 was 30·43 per mille, and in the ten years 1900–9 was 34·52 per mille. The death-rate in 1897 was 36·03 per mille, and in 1900 38·91 per mille.

The Duties of Certifying Surgeons.

Mr. STEEL MAITLAND asked the Secretary of State for the Home Department whether any steps had been taken with regard to the appointment of a committee to consider the question of the position and duties of certifying surgeons referred to in the recent report of the Departmental Committee on Accidents in Factories and Workshops; if so, whether he could say what was the constitution of the committee and what were its terms of reference; and, if not, when it was proposed that such steps should be taken.—Mr. CHURCHILL wrote in reply: The question has been under my consideration. In view of the great pressure on my department I cannot deal with it now, but I hope later to appoint a committee to investigate this and possibly other allied questions.

Medical Officer to the Post Office in Dublin.

Mr. DELANY asked the Postmaster-General whether he could state the age and length of service of the official medical officer to the Post Office Department at Dublin, and whether the Civil Service rule of retirement applied to his office.—Mr. H. SAMUEL (in a written answer) replied: The medical officer to the Post Office in Dublin is 69 years of age, and has had 31 years' service. He will retire on Dec. 31st next. The post is not one which comes within the scope of the Superannuation Acts, as its holder is not required to give his whole time to the public service.

MONDAY, MAY 22ND.

National Insurance.

Mr. BOOTH asked the Chancellor of the Exchequer whether he had received a deputation from the medical profession asking for better treatment under the National Insurance Bill; and whether he contemplated acceding to their request for payment according to the number of visits paid; and, if so, what additional safeguards he proposed to introduce to prevent the dangers of malingering.—Mr. LLOYD GEORGE replied: I have received deputations of members of the medical profession on this subject both before and since the provisions of the Bill were made public. I propose making a statement on the position of medical men under the scheme during the discussion on the second reading of the Bill.

Sir HENRY CRAIK: May I ask the right honourable gentleman whether he is aware that a meeting in connexion with the British

Medical Association has been fixed for May 31st, and would it not be possible to wait until then before we vote upon the second reading?

Mr. MITCHELL THOMSON: Is the right honourable gentleman aware that the Royal College of Surgeons of Edinburgh have passed a resolution asking whether the consideration of the measure cannot be further postponed?

Mr. LLOYD GEORGE: With regard to these two questions, I think it will be of great advantage to these medical men when they meet on May 31st that there should have been a further discussion in the House of Commons on those points. I am sure that there still is a complete misapprehension as to the position of medical men under the scheme. I think that they will discover that their position will be enormously improved under it, and therefore I think it will be a great advantage to them that there should be another discussion in the House before they meet.

Mr. AUSTEN CHAMBERLAIN: Does the right honourable gentleman bear in mind that it is not only the medical men but all the friendly societies who are interested in the Bill, and that it is impossible for them to have their meetings before the date fixed for the second reading discussion or for Members of Parliament to be informed of the decisions and opinions expressed at those meetings if the Government adhered to the present date (Wednesday, May 24th)? In order that the House may discuss the matter with full knowledge and come to a sounder decision, will the right honourable gentleman consider the advisability of taking the second reading on a later date?

Mr. LLOYD GEORGE: I am sure the House will be very reluctant to fix any date that would imperil the passage of the Bill, or that would unduly prolong the length of the session. Really I think if the right honourable gentleman has followed the subject as closely as I am bound to do he will have discovered that all the criticisms directed against the scheme are criticisms of details, and invariably honourable Members have prefaced their remarks by stating that they are in favour of the object and principle of the Bill. That is all that the second reading affirms. It does not go beyond that, and I think it will be of enormous advantage to all those friendly societies, insurance societies, and medical men for us to have a full discussion extending over two days in the House of Commons in order to enlighten them upon points which they are really not clear about. It would be an advantage that we should have that discussion before rather than after the meetings referred to.

Mr. H. LAWSON asked the Prime Minister whether honourable Members might take it as settled that the Bill would be considered in Committee of the whole House, so that every Member might have an opportunity of discussing it.

Mr. ASQUITH replied: My impression at present is that the Bill ought to be considered in this House.

Birth-rate of the Feeble-minded.

Mr. HOUSTON asked the Secretary of State for the Home Department whether he would state the number of children born during the past ten years to all the married males and married females certified as insane or feeble-minded, and now resident in homes or asylums of England and Wales, Scotland, and Ireland (separately), and the latest date to which this return was compiled.—Mr. CHURCHILL replied: Under the existing law no persons can be certified as feeble-minded. That is a matter with which I hope to deal in the Bill I propose to introduce on this subject. As regards persons certified to be insane, I find that there are no returns of the number of their children, and I am advised that it will be difficult, if not impossible, to obtain statistics of any value, and that the cost of collection would be very great. Statements made by the patients themselves would necessarily be unreliable, and each case would have to be made the subject of inquiry and correspondence.

Mr. HOUSTON asked the right honourable gentleman whether he would consider the desirability of obtaining statistics as to the number of children born to unmarried feeble-minded women, and as to the number of children born to parents who had been imprisoned for a longer time than 14 days, or to parents who were or had been certified at any time as feeble-minded.—Mr. CHURCHILL replied: There are at present no complete or trustworthy statistics as to the number of children born to mentally defective parents, but the statistics of the Royal Commission on the Feeble-minded will be found in its published report and appendices. The Bill which is being prepared to carry out the recommendations of the Royal Commission will, I hope, enable proper statistics to be obtained in the future. It would not be possible to obtain statistics as to the number of children born to parents who had been in prison for a longer period than 13 days.

Gratuities to Vaccination Officers.

Mr. STAVELEY-HILL asked the President of the Local Government Board whether he would state the names of the 25 boards of guardians who had declined to act upon the suggestion of the Local Government Board to award gratuities to their vaccination officers to meet the loss of income sustained by these officers in consequence of the Vaccination Act and Order, 1907, such gratuities to be based on the average income of these officers for the years 1903–07, and that where the deficiency was likely to be permanent the officers' fees should be increased, and the amount of the loss that each of these officers had sustained when they informed the Local Government Board that their boards of guardians had not taken any steps to make up the deficiency in their income in consequence of the Vaccination Act and Order, 1907.—Mr. BURNS wrote in reply: The figure 25 which I gave in my answer to the honourable Member on March 14th referred to vaccination officers and not to boards of guardians. The names of the boards of guardians with whom I have communicated are as follows: Blackburn, Bristol, Burton-on-Trent, Croydon, Dudley, Farnham, Gainsborough, Glanford, Brigg, Grantham, Hailsham, Hammersmith, Kidderminster, Pontypridd, Reigate, Taunton, Tewkesbury, Witney, and York. The annual loss, so far as can be ascertained, which the vaccination officers experienced varied considerably. I doubt if it is advisable to publish the loss estimated to have been sustained by each particular officer, but I may state that in eight cases it did not exceed £10 in the year 1909. In three cases it exceeded £50.

TUESDAY, MAY 23RD.

National Insurance.

Mr. ASTOR asked the Chancellor of the Exchequer whether maternity benefit under the National Insurance Bill included and covered medical attendance.—Mr. LLOYD GEORGE replied: The answer is in the affirmative.

Mr. ASTOR asked the Chancellor of the Exchequer whether it was proposed to include surgical treatment in the medical benefits to be given to persons insured under the National Insurance Bill.—Mr. LLOYD GEORGE answered: The present practice of the friendly societies is only to provide such surgical treatment of a minor nature as may be covered by their agreements with medical men.

Mr. JAMES PARKER asked the right honourable gentleman whether the term disablement in Section 13 of the Insurance Bill included isolation for small-pox; and, if so, whether insured persons could be deprived of benefit under the Bill if the societies made regulations insisting on the vaccination of such persons.—Mr. LLOYD GEORGE furnished the following written reply: A person isolated for small-pox in a hospital provided by a public authority is not entitled to disablement benefit, as it is not consistent with the scheme of the Bill to make provision for persons otherwise provided for. If, however, he had dependents they would be entitled to the benefit. There is nothing to prevent a society from making a rule of the sort mentioned or to compel a person to join such a society.

BOOKS, ETC., RECEIVED.

ARNOLD, EDWARD, 41 and 43, Maddox-street, Bond-street, London, W.

Minding the Baby. A Manual of Infant Care and Management. By Mrs. Leonard Hill, Author of "The Management of Babies." Prefaced by Dr. Christopher Addison, M.P. Price, paper, 3d. net; cloth, 6d. net.

BAILLIÈRE, J. B., ET FILS, Paris.

Bibliothèque de Thérapeutique. Publiée sous la Direction de A. Gilbert, et P. Carnot. Médications Générales. Par les Docteurs Ch. Bouchard, H. Roger, Sabouraud, Sabrazès, Pouchet, Balthazard, Langlois, Bergonié, Carnot, Marie et Clunet, Pinard, Apert, Maurel, Rauzier, Lépine, Albert Robin et Coyon, Chauffard, Widal et Lemierre. Price Fr.14.

BALE (JOHN), SONS, AND DANIELSSON, LIMITED, London.

The British Sanatoria Annual. With numerous Illustrations. 1911. Price 3s. 6d. net.

CHURCHILL, J. AND A., London.

A Systematic Handbook of Volumetric Analysis; or the Quantitative Determination of Chemical Substances by Measure, Applied to Liquids, Solids, and Gases. By Francis Sutton, F.I.C., F.C.S., Public Analyst for the County of Norfolk. Tenth edition. Revised throughout, with numerous Additions, by W. Lincoln Sutton, F.I.C., Public Analyst for the County of Suffolk, Norwich, Ipswich, &c., and Alfred E. Johnson, B.Sc. Lond., F.I.C., A.R.C.Sc.I. Price 21s. net.

Materia Medica Step by Step. By Arthur W. Nunn, F.C.S., Pharmaceutical Chemist, Materia Medica Medallist. Price 3s. 6d. net.

CURRIE, JOHN, 16, Teviot-place, Edinburgh.

Handbook of Medical Treatment. A Guide to Therapeutics for Students and Practitioners, with an Appendix on Diet. By James Burnet, M.A., M.D., M.R.C.P. Edin. Price 3s. 6d. net.

GOVERNMENT PRINTING OFFICE, Washington.

Yellow Fever. A Compilation of Various Publications, Results of the Work of Major Walter Reed, Medical Corps, United States Army, and the Yellow Fever Commission. Presented by Mr. Owen. (Printed for the Use of the Senate, 61st Congress, 3rd Session, Document No. 822.)

KEGAN PAUL, TRENCH, TRÜBNER, AND CO., LIMITED, London.

Through the Alps to the Appennines. By P. G. Konody. With 93 Illustrations from Photographs and from Pencil Sketches by E. A. Rickards and a Frontispiece in Colour from a Drawing by Robert Little, R.W.S. Price 12s. 6d. net.

LIVINGSTONE, E. AND S., Edinburgh.

Anatomy of the Brain and Spinal Cord. By J. Ryland Whitaker, B.A., M.B. Lond. Fourth edition. Price 5s. 6d. net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.

Cat's Cradles from Many Lands. By Kathleen Haddon. With Fifty-nine Illustrations. Price 2s. 6d. net.

MACLEHOSE, ROBERT, AND CO., LIMITED, University Press, Glasgow.

Regimen Sanitatis: The Rule of Health. A Gaelic Medical Manuscript of the Early Sixteenth Century or perhaps Older. From the Vade Mecum of the Famous Macbeaths, Physicians to the Lords of the Isles and the Kings of Scotland for Several Centuries. By H. Cameron Gillies, M.D. Dedicated to John Fourth Marquis of Bute. Price not stated.

MACMILLAN AND CO., LIMITED, London.

Health Reader III. Life and Health, with Chapters on First-Aid and Home Nursing. By C. E. Shelly, M.A., M.D., M.R.C.P., and E. Stenhouse, B.Sc. Price 1s. 8d.

An Introduction to Therapeutic Inoculation. By D. W. Carmalt Jones, M.A., M.D. Oxon., M.R.C.P. Lond. Price 3s. 6d. net.

MARHOLD, CARL, Halle a.S.

Der gegenwärtige Stand der Pathologie und Therapie der Gallensteinkrankheit. Von Dr. Ludwig Arnsperger, Privatdozent für Chirurgie an der Universität Heidelberg. Price M.2.

NEW ERA PRINTING CO., Lancaster, Pa., U.S.A.

Publications from the University of Pittsburgh Medical School Pathological Laboratories. Arteriosclerosis, Diseases of the Media and their Relation to Aneurysm. By Oskar Klotz, M.B. Tor., M.D., C.M. McGill, Professor of Pathology and Bacteriology, University of Pittsburgh, Pittsburgh, Pa. Price not stated.

ORDER OF THE GOLDEN AGE, 153, 155, Brompton-road, London, S.W.

The Cancer Scourge and How to Destroy It. By Robert Bell, M.D., F.R.F.P.S., &c. Price not stated.

REBMAN, LIMITED, London. REBMAN COMPANY, New York.

Cystoscopy as Adjuvant in Surgery. With an Atlas of Cystoscopic Views and Concomitant Text for Physicians and Students. By Staff-Surgeon Dr. O. Rumpel, Lecturer in Surgery at the University of Berlin. Only authorised English Translation by P. W. Shedd, M.D., New York. Price 42s. net.

Atlas of Microscopic Diagnosis in Gynecology. With Preface and Explanatory Text. By Dr. Rudolf Jolly, Priv. Doc., Chief Physician of the Gynecologic Clinic, University of Berlin. Only authorised English Translation by P. W. Shedd, M.D., New York. Price 25s. net.

The Modern Treatment of Alcoholism and Drug Narcotism. By C. A. McBride, M.D., L.R.C.P. & S. Edin. Price 6s. net.

SAUNDERS (W. B.) COMPANY, Philadelphia and London.

A Handbook of Practical Treatment. By Many Writers. Edited by John H. Musser, M.D., LL.D., Professor of Clinical Medicine in the University of Pennsylvania, Philadelphia, and A. O. J. Kelly, A.M., M.D., Assistant Professor of Medicine in the University of Pennsylvania, Philadelphia. Volume II. Price per set, 75s. net.

A Text-book of Medical Diagnosis. By James M. Anders, M.D., Ph.D., LL.D., Professor of the Theory and Practice of Medicine and of Clinical Medicine, Medico-Chirurgical College of Philadelphia, and L. Napoleon Boston, A.M., M.D., Adjunct Professor of Medicine, Medico-Chirurgical College; Physician to the Philadelphia General Hospital. Price 25s. net.

Practical Cystoscopy and the Diagnosis of Surgical Diseases of the Kidneys and Urinary Bladder. By Paul M. Pilcher, A.M., M.D., Consulting Surgeon to the Eastern Long Island Hospital. Price 24s. net.

Hospital Management. A Handbook for Hospital Trustees, Superintendents, Training School Principals, Physicians, and all who are actively engaged in promoting Hospital Work. Edited by Charlotte A. Aikens, formerly Director of Sibley Memorial Hospital, Washington. Price 13s. net.

STEINHEIL, G., PARIS.

Les Syncinésies. Leurs Rapports avec les Fonctions d'Inhibition Motrice. Par le Docteur G. Stroehlin, Ancien Interne des Hôpitaux de Paris et de l'Infirmerie de la Préfecture de Police. Price not stated.

THIEME, GEORG, Leipzig.

Veröffentlichungen der Robert Koch-Stiftung zur Bekämpfung der Tuberkulose. Herausgegeben vom Vorstand der Stiftung. Heft I. Ueber den Typus der Tuberkelbazillen im Auswurf der Phthisiker. Von Stabsarzt Dr. B. Möllers. Price M.3. Heft II. Untersuchungen über tuberkulöse Infektion im Kindesalter. Von Stabsarzt Dr. Rothe. Price M.2.20.

UNIVERSITY PRESS, Cambridge. (CAMBRIDGE UNIVERSITY PRESS, C. F. CLAY, Manager), Fetter-lane, London, E.C.

An Introduction to Experimental Psychology. By Charles S. Myers, M.D., Sc.D., Lecturer in Experimental Psychology in the University of Cambridge. Price 1s. net.

VEIT AND COMPANY, VERLAG VON, Leipzig.

Lehrbuch der Allgemeinen und Speziellen Chirurgie, einschliesslich der Modernen Operations und Verbandlehre. Von Hermann Tillmanns, Dr.med.et Sc., Geheimer Medizinalrat und Professor an der Universität Leipzig. Zweiter Band. Lehrbuch der Speziellen Chirurgie. Neunte, verbesserte und vermehrte Auflage. Erster Teil. Chirurgie des Kopfes, des Halses, der Brust, der Wirbelsäule, des Rückenmarks und Beckens. Zweiter Teil. Chirurgie des Unterleibs und der Extremitäten. Price, paper, M.50; bound, M.55.

VIGOT FRÈRES, Paris.

Les Interventions Médicales d'Urgence. Par G. Lemoine, Professeur de Clinique Médicale à la Faculté de Médecine et de Pharmacie de Lille. Price Fr.6.

Les Applications Pratiques du Laboratoire à la Clinique: Principes, Techniques, Interprétations des Résultats. Par le Dr. E. Agasse-Lafont, Ancien Chef de Clinique de la Faculté de Paris, Chef de Laboratoire à l'Hôpital Saint-Antoine. Préface par M. le Professeur G. Hayem. Price Fr.10.

Formulaire Consultations Médicales et Chirurgicales. Par MM. G. Lemoine et E. Gérard avec la Collaboration de MM. B. Doumer et J. Vanverts. Cinquième Edition, conforme au nouveau Codex 1908. Price Fr.7.

Technique de Stérilisation. Par le Dr. Ern. Gérard, Professeur de Pharmacie et de Pharmacologie à la Faculté de Médecine et de Pharmacie de Lille. Deuxième Édition augmentée. Price Fr.6.

La Neurasthénie Rurale. Par le Dr. Raymond Belbèze (de Nevers). Préface de M. le Professeur Rémond (de Metz). Price Fr.3.50.

Guide Pratique de l'Infirmière-Hospitalière et de l'Infirmier-Brancardier. Par le Dr. Edmond Morin (Publié sous le patronage de la Société de la Croix Rouge, Union des Femmes de France). Price Fr.2.25.

Manuel de Culture Physique. Par C. C. Pagés, Docteur en Médecine, Docteur ès Sciences, Vétérinaire délégué de Paris et de la Seine. Price Fr.3.50.

Clinique Thérapeutique de la Faculté de Médecine de Paris, Hôpital Beaujon. Thérapeutique Usuelle du Praticien. Par Albert Robin, Professeur de Clinique Thérapeutique à la Faculté de Médecine de Paris. Deuxième Série. Price Fr.8.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

BENTHALL, A., M.R.C.S., F.R.C.P. Edin., has been appointed one of the Medical Referees under the Workmen's Compensation Act, 1906, for County Court Circuit No. 45, to be attached more particularly to Croydon and Epsom County Courts.

COATS, GEORGE, M.D. Glasg., F.R.C.S. Eng., has been appointed Assistant Ophthalmic Surgeon to St. Mary's Hospital.

HARRIS, WILFRED, M.D. Cantab., F.R.C.P. Lond., has been appointed Physician to St. Mary's Hospital.

MILLER, REGINALD, M.D. Lond., M.R.C.P. Lond., has been appointed Physician-in-Charge of Out-patients at St. Mary's Hospital.

PATON, LESLIE, F.R.C.S. Eng., has been appointed Ophthalmic Surgeon to St. Mary's Hospital.

PLATT, H., M.B., B.S. Lond., M.B., Ch.B. Manch., has been appointed Clinical Assistant to St. Mark's Hospital.

TURTLE, GODFREY DE BEC, M.D. Durh., M.R.C.P. Lond., has been appointed Physician to Margaret-street Hospital for Consumption.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BANBURY, HORTON INFIRMARY.—House Surgeon. Salary £80 per annum, with board and residence.

BARBADOS GENERAL HOSPITAL.—Junior Resident Surgeon, unmarried. Salary £250 per annum and quarters.

BARNSLEY, BECKETT HOSPITAL.—Second House Surgeon, unmarried. Salary £100 per annum and all found.

BENENDEN, KENT, NATIONAL SANATORIUM.—Assistant Medical Officer, unmarried. Salary £100 per annum, with board, lodging, and washing.

BEXHILL, QUEEN'S HOSPITAL FOR CHILDREN SEASIDE BRANCH (LITTLE FOLKS HOME).—Honorary Visiting Medical Officer.

BIRKENHEAD BOROUGH HOSPITAL.—Junior Resident House Surgeon. Salary £80 per annum, with board and washing.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Junior House Surgeon. Salary £70 per annum, with board and residence.

BIRMINGHAM AND MIDLAND HOSPITAL FOR SKIN AND URINARY DISEASES.—Clinical Assistant for three months. Salary at rate of 52 guineas per annum.

BRECONSHIRE EDUCATION COMMITTEE.—Temporary Assistant School Medical Officers. Salary 5 guineas per week.

BRIGHTON, ROYAL SUSSEX COUNTY HOSPITAL.—Assistant Pathologist. Salary £100 per annum, with board, residence, and laundry.

BRISTOL ROYAL INFIRMARY.—Resident Casualty Officer for six months. Salary at rate of £50 per annum, with board, lodging, and washing.

BURY INFIRMARY.—Senior House Surgeon and Junior House Surgeon. Salary £110 and £80 per annum respectively, with board, residence, and washing.

CANTERBURY, KENT AND CANTERBURY HOSPITAL.—House Physician, unmarried. Salary £70 per annum, with board, lodging, and washing.

CARDIFF UNION WORKHOUSE.—Assistant Medical Officer, unmarried. Salary £130 per annum, with rations, apartments, attendance, and washing.

CHARING CROSS HOSPITAL.—Clinical Pathologist and Bacteriologist. Salary £200 per annum.

CHELTENHAM GENERAL HOSPITAL.—House Physician, unmarried. Salary £80 per annum, with board, lodging, and washing.

CHESTER, CITY AND COUNTY OF THE CITY OF CHESTER.—Medical Officer of Health. Salary £500 per annum.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £70 per annum, with board, apartments, and laundry.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria Park, E.—Laryngologist. Also House Physician for six months. Salary at rate of £75 per annum, with board, residence, and washing.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon. Salary £80 per annum, with board, washing, and residence.

COVENTRY AND WARWICKSHIRE HOSPITAL.—Junior House Surgeon. Salary £80 per annum, with rooms, board, washing, and attendance.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant House Surgeon for six months, unmarried. Salary at rate of £50 per annum, with board, apartments, and laundry.

DUMFRIES, CRICHTON ROYAL INSTITUTION.—Junior Assistant Physician, unmarried. Salary £150 per annum, with apartments, board, and laundry.

DURHAM COUNTY COUNCIL.—Ophthalmic Surgeon. Also School Medical Inspector. Salary in each case £300 per annum.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—Pathologist and Registrar. Salary £100 per annum.

GLASGOW SCHOOL BOARD.—Assistant Medical Officer (female). Salary £250 per annum.

INDIAN MEDICAL SERVICE, India Office, London.—Twelve Commissions in His Majesty's Indian Medical Service.

ITALIAN HOSPITAL, Queen-square, London, W.C.—Honorary Assistant Physician. Also House Surgeon for six months. Salary £60 per annum, with board and residence.

KING'S COLLEGE HOSPITAL, London.—Clinical Assistant.

KING'S LYNN, WEST NORFOLK AND LYNN HOSPITAL.—House Surgeon, unmarried. Salary £110 per annum, with board, lodging, and washing.

KIRKBURTON, NEAR HUDDERSFIELD, STORTHES HALL ASYLUM.—Assistant Medical Officer. Salary £140 per annum, with rooms, board, attendance, and washing.

LANCASHIRE EDUCATION COMMITTEE.—School Medical Inspector. Salary £250 per annum.

LEEDS GENERAL INFIRMARY.—Ophthalmic House Surgeon for six months. Salary at rate of £50 per annum, with board, residence, and washing. Also Obstetric Officer and House Physician.

LEEDS HOSPITAL FOR WOMEN AND CHILDREN.—House Surgeon for six months. Salary at rate of £50 per annum, with board.

LEICESTER INFIRMARY.—Senior House Surgeon. Salary £140 per annum, with board, apartments, and washing. Also House Surgeon for six months. Salary at rate of £120 per annum, with board, apartments, and washing.

LONDON HOSPITAL, Whitechapel, E.—Medical Registrarship. Salary £100 per annum. Also Surgical Registrarship. Salary £100 per annum.

MARGATE, ROYAL SEA BATHING HOSPITAL FOR SURGICAL TUBERCULOSIS.—Junior Resident Surgeon. Salary £30 per annum, with board and residence.

MILLER GENERAL HOSPITAL FOR SOUTH-EAST LONDON, Greenwich-road, S.E.—Honorary Anæsthetist.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood.—Clinical Assistants for six months.

NORWICH, NORFOLK AND NORWICH HOSPITAL.—House Physician, unmarried. Salary £80, with board, lodging, and washing.

NOTTINGHAM CHILDREN'S HOSPITAL.—House Surgeon (female) for six months. Salary at rate of £100 per annum, with apartments, board, and washing.

PEMBROKESHIRE COUNTY COUNCIL.—County Medical Officer of Health. Salary £400 per annum.

PORTSMOUTH, ROYAL PORTSMOUTH HOSPITAL.—House Physician for six months. Salary £75 per annum, with board, &c.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Honorary Physician or Surgeon to X Ray and Electrical Department. Also Junior House Physician for six months. Salary £50 per annum, with residence, board, and laundry.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—House Surgeon for six months. Salary at rate of £80 per annum, with board, residence, and washing.

ROYAL EAR HOSPITAL, Dean-street, Soho, W.—Assistant Surgeon.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Honorary Dental Surgeon.

ROYAL LONDON OPHTHALMIC HOSPITAL (MOORFIELDS EYE HOSPITAL), City-road, E.C.—Senior House Surgeon, Second House Surgeon, and Third House Surgeon for eight months. Salary, Senior House Surgeon at rate of £100 per annum, Second House Surgeon at rate of £75 per annum, and Third House Surgeon at rate of £50 per annum, all with board and residence. Also Two Refraction Assistants. Salary at rate of £25 per annum, with lunch.

ST. MARYLEBONE INFIRMARY, Rackham-street, Notting Hill, W.—Second Assistant Medical Officer for six months. Salary £50, with apartments, rations, and washing.

ST. MARY'S HOSPITAL, London, W.—Resident Assistant Anæsthetist for six months. Salary at rate of £100 per annum, with board and residence.

ST. PANCRAS INFIRMARY (NORTH), Dartmouth Park Hill, N.—Junior Assistant Medical Superintendent. Salary £100 per annum, with apartments, rations, and washing.

ST. THOMAS'S HOSPITAL.—Surgeon-in-Charge of the Throat Department.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £80 per annum, with board, residence, and allowance for laundress.

SHEFFIELD ROYAL INFIRMARY.—Seventh Resident Medical Officer. Salary £60 per annum.

SOUTHAMPTON, ROYAL SOUTH HANTS AND SOUTHAMPTON HOSPITAL.—Junior House Surgeon for six months. Salary £60 per annum, with rooms, board, and washing.

STROUD GENERAL HOSPITAL.—House Surgeon. Salary £100 per annum, with board, lodging, and washing.

TAUNTON, SOMERSET AND BATH ASYLUM, Cotford.—Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, board, washing, attendance, &c.

TAUNTON, TAUNTON AND SOMERSET HOSPITAL.—Senior House Surgeon. Salary £120 per annum, with board, lodging, and laundry.

TEIGNMOUTH HOSPITAL, S. Devon.—House Surgeon. Salary £80, with board, lodging, and laundry.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Surgeon for six months. Salary £40, with board, lodging, and laundry.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician for six months. Board, lodging, and laundry provided.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £80 per annum, with board, rooms, and laundry.

WOOLWICH TUBERCULOSIS DISPENSARY.—Medical Officer. Salary £250 per annum.

THE Chief Inspector of Factories, Home Office, London, S.W., gives notice of vacancies as Certifying Surgeons under the Factory and Workshop Act at Machynlleth, in the counties of Merioneth and Montgomery; at Banbury, in the county of Oxford; and at Swineford, in the county of Mayo.

Births, Marriages, and Deaths.

BIRTHS.

BENNION.—On May 16th, at Sandlings, St. Mary Cray, Kent, the wife of Jno. Menlove Bennion, M.D., B.C. Cantab., a daughter.

MARRIS.—On May 20th, the wife of H. Fairley Marris, M.A. Cantab., M.R.C.P. Lond., of 85, New Cavendish-street, W., and Ford Cottage, Bourne End, of a daughter.

DEATHS.

MACLAREN.—On May 20th, at Drumsheugh-gardens, Edinburgh, Peter Hume Maclaren, M.D., F.R.C.S. Edin., in his 75th year.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

PUBLIC HEALTH IN TASMANIA.

THE report of the Public Health Department of Tasmania for the 12 months ending June 30th, 1910, was presented with admirable punctuality in October. Dr. J. S. C. Elkington, having become Commissioner of Health for Queensland, handed over the Tasmanian charge in February to Dr. J. S. Purdy, late of New Zealand. *Vital statistics.*—The population at the end of 1909 was estimated at 186,860; the natural increase (18·74 per 1000) is higher than in any other Australian State, being, indeed, second only to that of Bulgaria amongst the countries where these statistics are recorded; it indicates a comparatively high birth-rate and low death-rate. Owing, however, to emigration to other Australian States the mean increase is much less; notwithstanding this emigration Tasmania has a larger proportion—viz., 86 per cent.—of Australian-born population than any other of the States of the Commonwealth. There has been a slight increase in the birth-rate, from 28·38 per 1000 in 1901 to 29·90 in 1909, the decennial average being 29·25. The death-rate for 1909 was 10·01, lower than in any year of the decennium, for which the average rate was 10·91. A notable reduction has taken place in the infantile mortality-rate, which was 65 per 1000 births, the decennial average being 89·5. Great improvement has taken place in Hobart, the capital, where the average infantile mortality had been 115·2, but during the year under review was only 78; on the other hand, at Launceston, the second principal town of Tasmania, the rate was 112, compared with a ten-year average of 108·9. It is noted that the decrease in the Hobart death-rate coincided with the introduction of the Infant Life Protection Act. The passing of an Early Notification of Births Act and the appointment of trained women health visitors for these two large towns will no doubt be of great benefit. *Mortality.*—Out of the total death-rate of 10·01 per 1000, the highest individual cause of death is returned as old age, causing 1·34 per 1000 persons living; next to this come diseases of the heart, causing 0·92; septic diseases (including pneumonia), 0·80; cancer (0·67); digestive system (0·66); pulmonary tuberculosis (0·62); and nervous diseases (0·62). If to these be added the deaths due to violence (0·61), premature birth (0·56), and ill-defined causes, such as atrophy and debility (0·42), it is evident that from the sanitarian's point of view the health of Tasmania is most satisfactory. *Preventable diseases.* Tuberculosis has decreased steadily, we are informed, during recent years; in 1909–10 the notifications were 135, of which 22 came from Hobart and 20 from Launceston; accommodation has been provided for advanced cases at these two towns, and it is also intended to erect special shelters at the new Charitable Institution at Launceston and elsewhere. Each case notified is followed up by the offer of accommodation, if the medical attendant thinks adequate isolation and the requisite precautionary measures against spread of infection are not available at the patient's home. Moreover, the out-patient departments of the chief hospitals are practically dispensaries for dealing with all tuberculous cases. Tuberculin is available, and applied, at the sanatorium. Dr. Purdy alludes to the establishment of a tree-planting colony for consumptives in New Zealand on similar lines to some of the Forestry consumptive camps in the United States. The work is being carried on in New Zealand under the Forestry Department, and when accommodation is sufficient for the treatment of active cases in Tasmania it may be possible to establish a convalescent camp for suitable cases on similar lines in the highlands. *Diphtheria*, unfortunately, shows a tendency to increase. In 1909 there were 257 cases, a much larger number than for many years past. The mortality ratio (fatality) has, however, declined, and now stands at 6·3 per cent. It may be that more care is now taken in diagnosis, and therefore more notifications made, than formerly. Dr. Purdy considers that "the range of infection is very limited, apart from its conveyance by direct agents." Beyond advocating the careful cleansing of schools, he does not advocate or allude to any particular preventive measures, nor does he mention any particular modes of spread of this disease. *Scarlet fever* occurred in epidemic form at Waratah, the disease showing the two peculiarities of greater incidence among males (34) than females (16), and of relatively high frequency in adults (14 out of 50 cases being over 18 years of age, and 12 of these being males); most of these men were engaged in mining. *Enteric fever* is excessively prevalent. 544 cases were recorded during the year, giving an attack ratio of 2·9 per 1000, which, as Dr. Purdy points out, is more than three times the incidence that in South-West Germany brought about the special commission of investigation and the antityphoid campaign of 1906. The death-rate in Tasmania was 0·20 per 1000. The actual number of cases was 544, and of deaths 37. At the mining town of Beaconsfield there were 31 cases in a population of 4896—i.e., a rate of 6·3 per 1000.

Instances are given of extremely faulty sanitary arrangements, and propagation by flies is considered to have been frequently the cause of spread, defective privies being largely in use. At Latrobe 51 cases occurred in a population of 1360—i.e., at the rate of 37·5 per 1000. In some mining settlements there appear to have been no sanitary provisions at all. In Dr. Purdy's view the source of infection is "always typhoid patients or typhoid carriers." This, however, attaches too wide a significance to the word "carrier." As generally understood, this connotes an individual, and is not held to apply to water, milk, infected clothing, &c., which are better termed "vehicles." It would tend to confusion if dissemination by a convalescent patient, and by means of an infected water-supply, were equally regarded as "carrier infection." "The filthy feet of fæcal feeding flies" have led to spread of the disease in Tasmania, as well as in India and at home. A useful hint is that livery stable keepers should keep fowls. These eat the larvæ and pupæ of flies, and six fowls for each horse in a stable are said to keep the stable free from flies. It is gratifying to learn that there has been a progressive decline in the death-rate of the capital. Whereas in 1899 the death-rate of Hobart was 14·96 per 1000, in 1909 it had dropped to 9·9, the lowest rate among the chief cities of Australia. The time has now arrived, it is urged, for the outlying authorities to unite with the city to form one jurisdiction, a Greater Hobart, in place of the three or more separate representative bodies that now control, and probably confuse, the administration. The question of the sewage disposal of Hobart has been a good deal under discussion, and the decision has now been arrived at to extend the outfall pipe to a distance of 426 feet from Macquarie Point, where it will discharge into a depth of 50 feet of water at mean low tide; this will obviate any danger of nuisance.

It is noted that a new Food and Drugs Act, on similar lines to legislation in New South Wales, South Australia, and New Zealand, was to come into force in March of the present year; and it is hoped that ultimately uniform standards and regulations for certain foods and drugs will be adopted for all parts of the British Empire; this would simplify procedure, more especially in manufacture and labelling of goods. Dr. Purdy is to be congratulated on this, his first annual report, which is conclusive evidence that the public health department of this member of the Commonwealth is in the hands of a thoroughly skilled and competent administrator.

THE FOUNDER OF "THE LANCET."

To the Editor of THE LANCET.

SIR,—From time to time there appear in your columns interesting allusions to the late Thomas Wakley, whose striking personality attracted the attention of contemporary writers, and whose well-known Radical tenets drew many a gibe from his opponents—gibes which Wakley appears to have known well how to pay back with interest. In your issue of Jan. 14th you published a letter in which I drew attention to a passage in "Friends of Bohemia" by E. M. Whitty, where Thomas Wakley is referred to as "the Crowner." Since writing that letter your contemporary the *Morning Post* has republished from its files certain contributions to its columns by Disraeli, who in the late "thirties" contributed to that journal violent articles inspired by the fight over the Corporations Bill. As I have not yet seen any reference to these articles in your columns I venture to quote two small extracts:—

> "Wason, Whalley, and Wakley complete the crew. Hudibrastic triad! Why, if they could only induce Mr. Abercromby to resign the chair, and contrive to smuggle Juggins into his seat we should have a Praise God Barebones Parliament again and the Rump to the very life."
>
> "Wakley is of a lighter order of mind than the preceeding worthies [Hume and Wharburton]. There is a vulgar vivacity about him which is not unamusing. He would make an admirable cad or a first-rate conductor of an omnibus."

I quote these elegant passages to you because they prove the inaccuracy of Whitty's view that Wakley was only known to a certain section of Londoners. Evidently he was regarded by the foes to Radicalism as a typical Radical. Evidently also as a hard hitter himself he bore no malice against those who hit back, for I never heard a suggestion that he desired ever to protect himself by appeal to the law for protection against abuse even of the most grossly personal kind.

I am, Sir, yours faithfully,

Wimpole-street, W., March 16th, 1911. BOOKWORM.

*** Wakley seldom had need to write much in abuse of his political foes. His description of them in his numerous speeches covered all the ground.—ED. L.

INTERNATIONAL CONGRESS OF PATHOLOGY (TURIN).

THIS Congress will take place, as we announced in THE LANCET of March 4th (p. 597), from Oct. 2nd to 5th, 1911, in the Institute of Pathological Anatomy of the University of Turin. The following further particulars are now announced. The subscription of each member has been fixed at 25 francs, and should be remitted to Dr. F. Vanzetti, Via Esposizione, 15, Turin, Italy, who will acknowledge its receipt and send the card of membership. The languages of the Congress will be English, French, German, and Italian. Cards for ladies will be issued at 10 francs each. These cards will admit to the sittings and fêtes given in honour of the Congress, but will not entitle the holders to the printed proceedings of the Congress. It is requested that the titles of communications intended to be presented should be sent as early as possible, and in any case before August 31st, to the secretary of the Congress, Dr. G. Satta, Corso Raffaello, 30, Turin. At the same time any necessary methods of demonstration by lantern, microscope, &c., should be indicated. In the assembly hall there will be a complete projection apparatus at the disposal of demonstrators. The material for the demonstrations should be addressed to the Institut d'Anatomie Pathologique, Via Esposizione, 15, Turin, Italy. Particulars of the reduced railway fares accepted and of the hotel accommodation available may be obtained by addressing the secretary at the address given above.

THE GREEK PLAY AT BRADFIELD COLLEGE.

THE presentation of a Greek play by the scholars of Bradfield College, Berks, will take place in the open-air Greek theatre on June 10th, 12th, 13th, 15th, and 17th. The play chosen is the *Agamemnon* of Æschylus. The play will begin at 3 P.M. and end about 5.5. Full information about trains, conveyances, &c., may be obtained by sending a stamped directed envelope to the Honorary Secretary Greek Play Committee, Bradfield College, near Reading.

THE SHALLOW SOUP PLATE.

THE resemblance of the conventional soup plate to the culture dish used in bacteriological practice is interesting, but of course the Petri dish has a lid to it while the soup plate has no such provision. If anybody were asked to suggest why the soup plate was made broad and shallow the almost certain answer would be that such an arrangement facilitates the cooling of the soup to a temperature comfortable to the mouth. We believe that utilitarians drink tea out of a saucer for the same reason. While that may be the explanation of the peculiar shape of the soup plate, the advantage indicated is surely insignificant compared with the obvious disadvantages which may probably arise from exposing so large a surface of nutrient fluid to the air. Soup should be served in a cup, a low broad tea-cup, and the method, which is becoming more usual, is hygienic. Too deep a vessel would be an error on the other side; its advantages would be cancelled by its great drawback—we should miss some of the delicate flavours of the soup. In the shallow champagne glass the bouquet as well as the taste can be appreciated. In a narrow deep glass the bouquet may miss appreciation altogether.

IN the notice of the Scholl "Foot-Eazer," which appeared in our issue of April 29th, we stated that the metal used in its manufacture was steel. We now learn that this arch-support is made of hardened German silver, which was chosen because it does not rust or break as steel is liable to do.

W. N. H. writes with regard to the notification of infectious diseases: "The Act states that '*Every* medical man attending on or called in to visit any patient, &c., with a fee attached to *each* certificate of 2s. 6d.' Does this mean that in case, say, three partners or an assistant—of course qualified—visiting the same patient, each must send in a notification to the sanitary authority? This certainly was the case some few years (15 years) ago." There has been no modification in the duty to notify which is imposed upon every practitioner by the Notification Act. But the point raised by our correspondent is a difficult one, and in the event of two or three certificates being sent in by members of the same firm in respect of one and the same patient there might be those who would take a wrong view of the circumstances. Moreover, it is possible that the framers of the Act did not contemplate this type of reduplication. Nevertheless, from a strictly legal standpoint it is difficult to see how such notification could be avoided.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

A DIARY OF CONGRESSES.

WE shall publish this diary from time to time that our readers may have under their hands the dates of the approaching scientific Congresses. It is unnecessary to issue the lists of all these functions week by week, and we propose to make only such gatherings as will occur in the immediate future the subject of regular announcement. The following Congresses, Conferences, and Exhibitions are announced for April and May, 1911:—

April–October.—Rome Exhibition (United Italy's Jubilee).
" 29th–Oct. 26th (Turin).—International Exhibition.
May 3rd–Oct. 31st (Glasgow).—Scottish Exhibition.
" 6th–Oct. 31st (Dresden).—International Hygiene Exhibition.
" 12th–Oct. 31st (London, Crystal Palace).—Festival of Empire Imperial Exhibition. (Profits to King Edward VII. Hospital Fund.)
" 13th–27th (London, Agricultural Hall).—Chemical Exhibition.

May 18th–June 3rd (London).—Royal Naval and Military Tournament.
„ 18th–October 31st (London, Shepherd's Bush).—Coronation Exhibition.
„ 19th–Oct. 31st (London).—Earl's Court Exhibition.
„ 24th–June 7th (Dublin).—"Ui Breasail" Health Exhibition.
„ 25th–27th (Boston).—American Dermatological Association.
„ 29th–31st (Philadelphia).—American Laryngological Association.
„ 30th (The Hague).—International Congress on Opium.
„ 30th–June 1st (Niagara Falls, Ont.)—Ontario Medical Association.
„ 30th–June 2nd (London).—National Conference on the Prevention of Destitution.
„ (Washington).—Conference on the Protection of Industrial Property. (Question of False Marking of Goods.)
June 1st–August 31st (Squirrels Heath, Romford).—Town Planning and Modern House and Cottage Exhibition.
„ 5th–8th (Kolberg, Prussia).—Fifth International Congress of Thalassotherapy.
„ 7th–9th (Montreal).—Canadian Medical Association.
„ 7th–10th (Munich).—Fourteenth Congress of the German Gynæcological Society.
„ 12th and 13th (Dresden).—Eighth Tuberculosis Physicians' Meeting.
„ 13th (Cork).—Annual Meeting of the Irish Medical Association.
„ 19th–22nd (Denver, Col.)—Sixty-seventh Annual Meeting of the American Medico-Psychological Association.
„ 26th and 27th (Los Angeles, Cal.).—Thirteenth Annual Meeting of the American Proctologic Society.
„ 27th–30th (Los Angeles, Cal.).—American Medical Association.
„ (Montreal).—American Climatological Society Meeting.

Medical Diary for the ensuing Week.

SOCIETIES.

ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).

THURSDAY.

OBSTETRICAL AND GYNÆCOLOGICAL SECTION (Hon. Secretaries—G. F. Blacker, J. H. Targett), at 11, Chandos-street, W.: at 8 P.M.

Specimens:
Dr. Victor Bonney: An Aid in the Diagnosis of Carcinoma.
Dr. A. H. N. Lewers: After-history of Fibroid Tumour Complicating Labour.
Dr. Herbert Spencer: Cancer of Body of Uterus in a Woman 29 Years of Age.
Mrs. Scharlieb: (1) Adeno-carcinoma of Uterus and Ovaries; (2) Carcinoma of Rectum.
Miss Frances Ivens: Early Tubal Pregnancy (with epidiascope).

Short Communication:
Dr. A. E. Johnson: Gangrene of the Vagina, Probably Due to the Action of a Pink Rubber Ring Pessary.

Paper:
Mr. Stanmore Bishop: The Rectum in Gynæcology.

FRIDAY.

LARYNGOLOGICAL SECTION (Hon. Secretaries—L. Hemington Pegler, W. H. Kelson).
Provincial Meeting at Bristol.
Annual Meeting.—Election of Officers and Council for Session 1911–1912.

Discussion:
On the Ocular and Orbital Complications of Nasal Affections (opened by Dr. StClair Thomson).

Demonstrations
Dr. Watson-Williams, Dr. Wm. Hill, Mr. Herbert Tilley, Dr. Finzi, and others.

NORTH-EAST LONDON CLINICAL SOCIETY, Prince of Wales's Hospital, Tottenham, N.

THURSDAY.—4.15 P.M., Clinical Meeting. Election of Officers, 1911–1912.

WEST LONDON MEDICO-CHIRURGICAL SOCIETY, West London Hospital.

FRIDAY.—8.30 P.M., Mr. L. A. Bidwell: Results of Gastro-enterostomy in Gastric and Duodenal Ulcer.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.

TUESDAY.—5 P.M., Dr. R. Crawfurd: The King's Evil—Lecture I., Origin. Under Plantagenets and Tudors. (Fitz-Patrick Lecture.)

THURSDAY.—5 P.M., Dr. R. Crawfurd: The King's Evil—Lecture II., With the House of Stuart. (Fitz-Patrick Lecture.)

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.

MONDAY.—4 P.M., Dr. J. Galloway: Clinique (Skin). 5.15 P.M. Lecture:—Dr. O. Grünbaum: A Physician's Experience of "Salvarsan."

TUESDAY.—4 P.M., Dr. W. H. Willcox: Clinique (Medical). 5.15 P.M., Lecture:—Mr. E. M. Corner: The Natural Cure and Mortality of Uncomplicated Hernia.

WEDNESDAY.—4 P.M., Mr. S. M. Smith: Clinique (Surgical). 5.15 P.M. Lecture:—Mr. W. H. Battle: The Value of the Radical Cure of Inguinal Hernia.

THURSDAY.—4 P.M., Dr. L. Guthrie: Clinique (Medical). 5.15 P.M., Lecture:—Dr. T. G. Stevens: Eclampsia.

FRIDAY.—4 P.M., Dr. D. McKenzie: Clinique (Ear, Nose, and Throat).

POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. Dr. Simson: Diseases of Women. 12 noon: Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Dr. Pritchard: Clinical.

TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M.: Mr. Etherington-Smith: Demonstration of Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Davis: Diagnosis of Disease in the Accessory Cavities of the Nose and its Treatment.

WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Dr. Simson: Gynæcological Demonstration. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Simson: Diseases of Women. 5 P.M., Lecture:—Dr. Beddard: Practical Medicine. (Lecture III.)

THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12.15 P.M., Lecture: Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery. (Lecture II.)

FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Mr. R. Lloyd: Administration of Anæsthetics.

SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Medical Registrar: Demonstration of Cases in Wards. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

MONDAY.—Clinics:—10 A.M., Surgical Out-patient (Mr. E. Gillespie), 2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Nose, Throat, and Ear (Mr. H. W. Carson).

TUESDAY.—Clinic:—10 A.M., Medical Out-patient (Dr. A. G. Auld). 2.30 P.M., Operations. Clinics:—Surgical (Mr. Howell Evans); Gynæcological (Dr. A. H. Giles). 3.30 P.M., Medical In-patient (Dr. A. J. Whiting). 4.30 P.M., Demonstration:—Dr. Chappel: Selected Medical Cases.

WEDNESDAY.—Clinics:—2.30 P.M., Medical Out-patient (Dr. T. R. Whipham); Skin (Dr. G. N. Meachen); Eye (Mr. R. P. Brooks). 3 P.M., X Rays (Dr. A. H. Pirie).

THURSDAY.—2.30 P.M., Gynæcological Operations (Dr. A. H. Giles). Clinics:—Medical Out-patient (Dr. A. J. Whiting); Surgical (Mr. Carson). 3 P.M., Medical In-patient (Dr. G. P. Chappel).

FRIDAY.—2.30 P.M., Operations. Clinics:—Medical Out-patient (Dr. A. G. Auld); Surgical (Mr. E. Gillespie); Eye (Mr. R. P. Brooks). 3 P.M., Medical In-patient (Dr. R. M. Leslie).

LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4.30 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. R. Carling: Surgery. 4.15 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin. 4.30 P.M., Special Lecture:—Mr. Pendlebury: Cæcostomy.

WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4.30 P.M., Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat.

FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.

SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

HOSPITAL FOR SICK CHILDREN (UNIVERSITY OF LONDON), Great Ormond-street, W.C.

TUESDAY.—5.15 P.M., Demonstration:—Mr. O. L. Addison: Diseases of Joints—Spine, Acute Infection. Tuberculosis. (Special Post-Graduate Course.)

FRIDAY.—5.15 P.M., Demonstration:—Mr. O. L. Addison: Diseases of Joints—Tuberculosis (continued). (Special Post-Graduate Course.)

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. D. Armour: Sinus Thrombosis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. T. G. Stewart: Traumatic Neurasthenia.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. D. Grant: Cases from the Throat Department.

THURSDAY.—Dr. Wethered: Expedition to Frimley Sanatorium from Waterloo Station at 1.10 P.M.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE SKIN, 49, Leicester-square, W.C.

TUESDAY.—5 P.M., Dr. K. Sibley: Lupus. (Post-Graduate Lecture.)

THURSDAY.—5 P.M., Dr. W. Griffith: The Pathology of the Dermis. (Post-Graduate Lecture.)

UNIVERSITY OF LONDON (UNIVERSITY COLLEGE), Institute of Physiology.

FRIDAY.—4.30 P.M., Dr. W. M. Bayliss; The Mechanism of Oxidation in Plants and Animals. (Lecture IV.)

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. F. C. Moore: Early Diagnosis of Cancer of the Stomach. (Post-Graduate Clinic.)

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (29th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.).

TUESDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London 2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.), Royal National Orthopædic (9.30 A.M. and 4 P.M.).

WEDNESDAY (31st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

THURSDAY (1st).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal National Orthopædic (9 A.M. and 3.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

FRIDAY (2nd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Royal National Orthopædic (3.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

SATURDAY (3rd).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic (2 P.M.) Hospitals operations are performed daily.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 24th, 1911.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain fall.	Solar Radio in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks.
May 18	30·02	E.	...	97	64	51	51	54	Overcast
,, 19	30·16	N.E.	...	85	57	49	51	56	Fine
,, 20	30·15	N.E.	0·02	74	53	47	45	48	Overcast
,, 21	30·23	N.E.	...	66	53	44	45	47	Overcast
,, 22	30·06	W.	...	106	69	43	48	51	Fine
,, 23	30·02	W.	...	118	71	51	51	54	Cloudy
,, 24	30·06	S.W.	...	115	72	54	56	59	Overcast

The following journals, magazines, &c., have been received:—Symonds' Meteorological Magazine, Birmingham Medical Review, Il Morgagni, Il Policlinico, Journal of Anatomy and Physiology, School Hygiene, Annali di Medicina Navale e Coloniale, American Medicine, Transactions of the United Services Medical Society, Office International d'Hygiène Publique, Die Psychiatrischen Aufgaben des Praktischen Arztes, Sleeping Sickness Bureau Bulletin, British Journal of Dermatology, Canadian Practitioner and Review, Annales des Maladies des Organes Génito-Urinaires, Malaya Medical Journal, Hospital Gazette, Archives de l'Institut Pasteur de Tunis, Tuberculosis, Pacific Medical Journal, Revue d'Hygiène.

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